

11/02/2011

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1214839 - R8 SDMS



Third West Weekly Report

Shepherd, Michael

to:

Joyce Ackerman, 'Craig Barnitz (cbarnitz@utah.gov)'

11/02/2011 12:45 PM

Hide Details

From: "Shepherd, Michael" <Michael.Shepherd@PacifiCorp.com>

To: Joyce Ackerman/R8/USEPA/US@EPA, "Craig Barnitz (cbarnitz@utah.gov)"
<cbarnitz@utah.gov>

7 Attachments



Weekly Reports 10-24-11 through 10-28-11.pdf Third West Weekly Log 2011-43.pdf 223070-1.pdf 223142-1.pdf



223268-1.pdf 223269-1.pdf 223363-1.pdf

Joyce & Craig,

Attached are the reports for the week of October 24, 2011.

All air monitoring results came back negative.

Please let me know if you have any questions.

Thanks,

Mike Shepherd
Project Manager
Rocky Mountain Power - Major Projects
801.220.4584 Office
801.631.1310 Cell
801.220.2797 Fax
michael.shepherd@pacificorp.com

REI LAB ***Reservoirs Environmental, Inc.***

October 31, 2011

Laboratory Code: RES
Subcontract Number: NA
Laboratory Report: RES 223268-1
Project # / P.O. #: None Given
Project Description: 3rd West Sub Station - RMP

Eldon Romney
R & R Environmental
47 West 9000 South #2
Sandy UT 84070

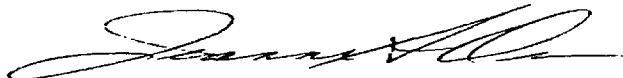
Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 223268-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,



Jeanne Spencer Orr
President

RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0; TDH: #30-0015

TABLE I. TEM AIR FILTER SAMPLE DATA AND ANALYTICAL RESULTS

RES Job Number: RES 223268-1
 Client: R & R Environmental
 Client Project Number / P.O.: None Given
 Client Project Description: 3rd West Sub Station - RMP
 Date Samples Received: October 28, 2011
 Analysis Type: TEM, AHERA
 Turnaround: 24 Hour
 Date Samples Analyzed: October 28, 2011

Client ID Number	Lab ID Number	Area Analyzed (mm ²)	Air Volume Sampled (L)	Number of Asbestos Structures Detected	Analytical Sensitivity (s/cc)	Asbestos Concentration (s/cc)	Filter Loading (s/mm ²)
3W-102711-E	EM 816061	0.0880	917	ND	0.0048	BAS	BAS
3W-102711-S	EM 816062	0.0880	916	ND	0.0048	BAS	BAS
3W-102711-N	EM 816063	0.0880	913	ND	0.0048	BAS	BAS
3W-102711-W	EM 816064	0.0880	916	ND	0.0048	BAS	BAS

NA = Not Analyzed

ND = None Detected

BAS = Below Analytical Sensitivity

Average Grid Opening in mm² = 0.011

Filter Material = Mixed Cellulose Ester

Filter Diameter = 25 mm

Effective Filter Area = 385 sq mm

g
 Digitally
 signed by
 Chris
 Ventrone
 Date:
 2011.10.31
 11:02:51
 -0600

DATA QA



3rd West Substation Site Project Safety Audit

Project: 3rd West Sub Station
 Location: 3rd West, 1st South, SLC
 Survey Conducted By: Jon Craig

Date: 10/24/11
 Job Number: _____
 Title: IH Technician

		In Compliance	Out of Compliance	N/A	
<i>Standard</i>	<i>Title</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Corrective Action Taken and Date</i>
1926.59	Hazard Communication Program, List of Chemicals, Training, MSDSs.			x	
1926.500 (b) & (d) (old standard)	Guardrails on open sided floors, floor holes and runways.			x	
1926.404 (b)	Ground fault circuit interrupters or an assured equipment grounding conductor program in use.	x			
1926.451 (b)	The employer shall instruct each employee in the recognition and avoidance of unsafe conditions.			x	
1926.451 (d)	Tubular welded scaffolds shall be properly braced so that they are plumb, square and rigid; legs on plumb, adjustable, mud sills, etc. to support the maximum load; guardrails and toeboards shall be installed.			x	
1926.100 (a)	Head protection, where there is a possible danger of head injury.	x			

Standard	Title	In Compliance	Out of Compliance	N/A	Corrective Action Taken and Date
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1926.652 (a) (1)	Excavation protective systems; examination by competent person when less than 5 feet in depth.			x	
1926.20 (b) (2)	Employer responsibility to initiate and maintain safety and health programs.	x			
1926.20 (b) (1)	Employer responsibility to provide for frequent and regular inspections by designated competent persons.	x			
1926.451 (e)	Manually propelled scaffolds shall have tight planking for the full width, platforms secured, ladder or stairway provided, suitable footing, stand plumbs, wheels locked, guardrails and toeboards.			x	
1926.1052 (c) (1)	Stair rail and handrail along each unprotected edge.			x	
1926.25 (a)	Debris, scrap lumber with protruding nails, not cleared for work areas, stairs and around structures.			x	
1926.50	First aid shall be available in the absence of an infirmary, or other that is reasonably accessible; first aid supplies shall be accessible and telephone numbers posted.			x	
1926.451 (a) (13)	Scaffolding safe access not provided by ladder or equivalent.			x	
1926.651 (k) (1)	Excavations, protective systems, inspected daily by a competent person and as needed.			x	
1926.403 (b) (2)	Employer shall ensure electrical equipment is free from recognized hazards, is suitable, used in accordance with the listing, labeling or certification.			x	

Standard	Title	In Compliance	Out of Compliance	N/A	Corrective Action Taken and Date
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1926.451 (a) (4)	Scaffolding shall have guardrails and toeboards when more than 10 feet high and when less than 45 inches of work space.			x	
1926.405 (g) (2)	Flexible cords shall be used without splice or tap; strain relief shall be provided.			x	
1926.405 (b)	Electrical boxes, fittings shall have covers, faceplates or canopy and holes shall be smooth where cords pass through; and unused openings in cabinets/boxes shall be closed.	x			
1926.701 (b)	Reinforcing steel onto which employees could fall shall be guarded.			x	
1926.1053 (b) (1)	Portable ladder side rails extend at least 3 feet or be secured at top.			x	
1926.651 (j) (2)	Excavations shall have materials or equipment placed at least 2 feet from the edge.	x			
1926.651 (c) (2)	Excavations shall have a safe means of egress such as ladders, ramps, etc.	x			
1926.150 (c) (1)	Portable fire fighting equipment shall be provided and extinguishers shall be inspected periodically.			x	
1926.102 (a) (1)	Eye and face protection shall be provided.	x			
1926.300 (b) (2)	Guards for power tools shall be used and moving parts of equipment shall be guarded.	x			
1926.350 (a) (9)	Oxygen cylinders in storage shall be separated from fuel gas cylinders by at least 20 feet or a ½ fire resistance barrier.			x	

		In Compliance	Out of Compliance	N/A	
<i>Standard</i>	<i>Title</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Corrective Action Taken and Date</i>
1926.405 (a) (2) (ii) (e) & (f)	Temporary lights shall be protected from breakage, not suspended by their cords and extension cord.			x	
1926.405 (a) (2) (ii) (j)	Extension cords used with portable electric tools shall be of three wire type and designed for hard or extra hard usage.	x			
1926.105 (a)	Workplaces more than 25 feet above the ground or water shall have safety nets when ladder, safety line/belts, temporary floors, scaffolds, catch platform are not practical.			x	
1926.1051 (a)	Stairway or ladder shall be provided at all access points where there is a break in elevation of 19 inches or more.			x	
1926.451 (a) (2)	Scaffolding footing or anchorage shall be sound, rigid and capable of carrying the maximum intended load.			x	
1926.500 (c) (1) (old standard)	Wall opening shall be guarded.			x	
1926.404 (f) (7)	Electrical equipment connected by cord and plug shall be grounded except if there is an isolating transformer or the tool is double insulated.	x			
1926.556 (b) (2)	When working from an aerial lift, a full body harness and lanyard attached to the boom or basket.			x	
1926.501 (b) (1) (new standard)	Guardrails, safety nets or personal fall arrest system shall be used at 6 feet or more.			x	

		In Compliance	Out of Compliance	N/A	
<i>Standard</i>	<i>Title</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Corrective Action Taken and Date</i>
1926.451 (a) (14)	Scaffold planking shall extend over their end support not less than 6 inches and not more than 12 inches.			x	
1926.602 (a) (9)	Bi-directional earth moving equipment shall have audible alarms.	x			
1926.451 (a) (3)	Scaffolding shall be erected, moved, dismantled or altered under the supervision of a competent person.			x	
1926.550 (b) (2)	Cranes, crawler, truck or locomotive, shall meet the design, testing, maintenance, and operation per ANSI B30.5_1968. The most recent certification shall be on file until a new one is prepared.			x	

Comments:

Newman excavating for footings in SE Area. No hauling soil off-site. Newman backfilling around the foundation of the new building in the exclusions.

CVE forming rebar in East Parking for footings in the SE excavated area. Crane in operation to stage rebar.

Continued construction of the New Building.

No disturbance of soil in the exclusion zone.

3RD WEST SUBSTATION REMEDIATION PROJECT

HEALTH SAFETY MANAGER (HSM)

DAILY CHECKLIST

DATE: 10/24/11

General

- ☒ Work area Health and Safety Inspection
- NA Review and if necessary update Activity Hazard Analyses (AHA) based on planned site activities for the day
- NA Safety Planning or "Tailgate" mandatory meeting for all employees and contractors prior to commencement of any site work. Instruction, review hazards, health & safety issues and any modifications to the CSHASP
- NA Site hazard and safety instruction for all first time employees, contractors or visitors
- NA Complete Employee Meeting Record Form B (where applicable)
- NA Document required Respirator Training completion with Form H
- NA Record times and numbers of dump trucks and trailers as they leave the site with contaminated material.
- NA Confirm return of waste material manifest documents for each load with site manager.
- NA Complete all CSHASP Forms (for applicable activities planned for that day)
 - NA Illness/Injury Report Form A
 - NA Site-Specific Training Record Form C
 - NA Hot Work Permit Form D
 - NA Trench/Evacuation Permit Form E
 - NA Combined Space Entry Permit Form F
 - NA Exclusion zone operations are practiced as instructed.
- NA Decontamination unit is working properly.
- NA Workers are using decontamination unit as instructed.
- NA Workers use personal protective equipment properly.
- ☒ Set air samples at cardinal compass points around exclusion zone. Check throughout the day to ensure proper operation.
- ☒ Observe control measures for dust and fugitive materials i.e. watering excavation sites and track out prevention.
- ☒ Review sign-in/sign-out log throughout and at the end of the workday.
- ☒ Secure the site at the end of the workday; PacifiCorp Employee

Sampling

- NA Soil Confirmation sampling for any newly excavated areas
- NA Stationary Air Monitoring during contaminated soil removal around the perimeter of the exclusions zone
- NA Personal Breathing Zone Monitoring on personnel conducting contaminated dust and soil removal
- NA Digitally photograph each sample location and at any place field sampling personnel determined necessary

- NA Electronically file photo files into the on-site database
- ☒ Complete Field Documentation
 - ☒ Field Sample Data Sheets (FSDS)
 - ☒ Logbook
- NA On-site computer database
- ☒ Label each sample media with a unique number
- ☒ Seal sample(s) in zip lock plastic bags
- ☒ Complete and include Chain of Custody (COC) Form required for shipping of samples to appropriate laboratory
- ☒ Package samples for transport IAW SOP 2-1, Packaging and Shipping of Environmental Samples
- ☒ Review and disseminate sample results as received from the laboratories to Project Manager and other appropriate managers and employees
- NA Electronically file sample reports into on-site database



3rd West Substation Site Project Safety Audit

Project: 3rd West Sub Station
Location: 3rd West, 1st South, SLC
Survey Conducted By: Jon Craig

Date: 10/25/11
Job Number: _____
Title: IH Technician

Standard	Title	In Compliance	Out of Compliance	N/A	Corrective Action Taken and Date
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1926.59	Hazard Communication Program, List of Chemicals, Training, MSDSs.			x	
1926.500 (b) & (d) (old standard)	Guardrails on open sided floors, floor holes and runways.			x	
1926.404 (b)	Ground fault circuit interrupters or an assured equipment grounding conductor program in use.	x			
1926.451 (b)	The employer shall instruct each employee in the recognition and avoidance of unsafe conditions.			x	
1926.451 (d)	Tubular welded scaffolds shall be properly braced so that they are plumb, square and rigid; legs on plumb, adjustable, mud sills, etc. to support the maximum load; guardrails and toeboards shall be installed.			x	
1926.100 (a)	Head protection, where there is a possible danger of head injury.	x			

		In Compliance	Out of Compliance	N/A	
<i>Standard</i>	<i>Title</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Corrective Action Taken and Date</i>
1926.652 (a) (1)	Excavation protective systems; examination by competent person when less than 5 feet in depth.			x	
1926.20 (b) (2)	Employer responsibility to initiate and maintain safety and health programs.	x			
1926.20 (b) (1)	Employer responsibility to provide for frequent and regular inspections by designated competent persons.	x			
1926.451 (e)	Manually propelled scaffolds shall have tight planking for the full width, platforms secured, ladder or stairway provided, suitable footing, stand plumbs, wheels locked, guardrails and toeboards.			x	
1926.1052 (c) (1)	Stair rail and handrail along each unprotected edge.			x	
1926.25 (a)	Debris, scrap lumber with protruding nails, not cleared for work areas, stairs and around structures.			x	
1926.50	First aid shall be available in the absence of an infirmary, or other that is reasonably accessible; first aid supplies shall be accessible and telephone numbers posted.			x	
1926.451 (a) (13)	Scaffolding safe access not provided by ladder or equivalent.			x	
1926.651 (k) (1)	Excavations, protective systems, inspected daily by a competent person and as needed.			x	
1926.403 (b) (2)	Employer shall ensure electrical equipment is free from recognized hazards, is suitable, used in accordance with the listing, labeling or certification.			x	

Standard	Title	In Compliance	Out of Compliance	N/A	Corrective Action Taken and Date
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1926.405 (b)	Electrical boxes, fittings shall have covers, faceplates or canopy and holes shall be smooth where cords pass through; and unused openings in cabinets/boxes shall be closed.	x			
1926.701 (b)	Reinforcing steel onto which employees could fall shall be guarded.			x	
1926.1053 (b) (1)	Portable ladder side rails extend at least 3 feet or be secured at top.			x	
1926.651 (j) (2)	Excavations shall have materials or equipment placed at least 2 feet from the edge.	x			
1926.651 (c) (2)	Excavations shall have a safe means of egress such as ladders, ramps, etc.	x			
1926.150 (c) (1)	Portable fire fighting equipment shall be provided and extinguishers shall be inspected periodically.			x	
1926.102 (a) (1)	Eye and face protection shall be provided.	x			
1926.300 (b) (2)	Guards for power tools shall be used and moving parts of equipment shall be guarded.	x			
1926.350 (a) (9)	Oxygen cylinders in storage shall be separated from fuel gas cylinders by at least 20 feet or a ½ fire resistance barrier.			x	

		In Compliance	Out of Compliance	N/A	
<i>Standard</i>	<i>Title</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Corrective Action Taken and Date</i>
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1926.105 (a)	Workplaces more than 25 feet above the ground or water shall have safety nets when ladder, safety line/belts, temporary floors, scaffolds, catch platform are not practical.			x	
1926.1051 (a)	Stairway or ladder shall be provided at all access points where there is a break in elevation of 19 inches or more.			x	
1926.451 (a) (2)	Scaffolding footing or anchorage shall be sound, rigid and capable of carrying the maximum intended load.			x	
1926.500 (c) (1) (old standard)	Wall opening shall be guarded.			x	
1926.404 (f) (7)	Electrical equipment connected by cord and plug shall be grounded except if there is an isolating transformer or the tool is double insulated.	x			
1926.556 (b) (2)	When working from an aerial lift, a full body harness and lanyard attached to the boom or basket.			x	
1926.501 (b) (1) (new standard)	Guardrails, safety nets or personal fall arrest system shall be used at 6 feet or more.			x	

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Comments:

Newman backfilling around the foundation of the new building in the exclusion zone.

CVE forming rebar in East Parking for footings in the SE excavated area. Continued construction of the New Building.

No disturbance of contaminated soil in the exclusion zone.

3RD WEST SUBSTATION REMEDIATION PROJECT

HEALTH SAFETY MANAGER (HSM)

DAILY CHECKLIST

DATE: 10/25/11

General

- ☒ Work area Health and Safety Inspection
- NA Review and if necessary update Activity Hazard Analyses (AHA) based on planned site activities for the day
- NA Safety Planning or "Tailgate" mandatory meeting for all employees and contractors prior to commencement of any site work. Instruction, review hazards, health & safety issues and any modifications to the CSHASP
- NA Site hazard and safety instruction for all first time employees, contractors or visitors
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- NA Digitally photograph each sample location and at any place field sampling personnel determined necessary

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- ☑ Complete Field Documentation
 - ☑ Field Sample Data Sheets (FSDS)
 - ☑ Logbook
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- ☑ Package samples for transport IAW SOP 2-1, Packaging and Shipping of Environmental Samples
- ☑ Review and disseminate sample results as received from the laboratories to Project Manager and other appropriate managers and employees
- NA Electronically file sample reports into on-site database



3rd West Substation Site Project Safety Audit

Project: 3rd West Sub Station

Date: 10/26/11

Location: 3rd West, 1st South, SLC

Job Number: _____

Survey Conducted By: Justin Kargis

Title: _____

Standard	Title	In Compliance	Out of Compliance	N/A	Corrective Action Taken and Date
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1926.59	Hazard Communication Program, List of Chemicals, Training, MSDSs.			x	
1926.500 (b) & (d) (old standard)	Guardrails on open sided floors, floor holes and runways.			x	
1926.404 (b)	Ground fault circuit interrupters or an assured equipment grounding conductor program in use.	x			
1926.451 (b)	The employer shall instruct each employee in the recognition and avoidance of unsafe conditions.			x	
1926.451 (d)	Tubular welded scaffolds shall be properly braced so that they are plumb, square and rigid; legs on plumb, adjustable, mud sills, etc. to support the maximum load; guardrails and toeboards shall be installed.			x	
1926.100 (a)	Head protection, where there is a possible danger of head injury.	x			

<i>Standard</i>	<i>Title</i>	In Compliance	Out of Compliance	N/A	<i>Corrective Action Taken and Date</i>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1926.652 (a) (1)	Excavation protective systems; examination by competent person when less than 5 feet in depth.			x	
1926.20 (b) (2)	Employer responsibility to initiate and maintain safety and health programs.	x			
1926.20 (b) (1)	Employer responsibility to provide for frequent and regular inspections by designated competent persons.			x	
1926.451 (e)	Manually propelled scaffolds shall have tight planking for the full width, platforms secured, ladder or stairway provided, suitable footing, stand plumbs, wheels locked, guardrails and toeboards.			x	
1926.1052 (c) (1)	Stair rail and handrail along each unprotected edge.			x	
1926.25 (a)	Debris, scrap lumber with protruding nails, not cleared for work areas, stairs and around structures.			x	
1926.50	First aid shall be available in the absence of an infirmary, or other that is reasonably accessible; first aid supplies shall be accessible and telephone numbers posted.			x	
1926.451 (a) (13)	Scaffolding safe access not provided by ladder or equivalent.			x	
1926.651 (k) (1)	Excavations, protective systems, inspected daily by a competent person and as needed.			x	
1926.403 (b) (2)	Employer shall ensure electrical equipment is free from recognized hazards, is suitable, used in accordance with the listing, labeling or certification.	x			

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<i>Standard</i>	<i>Title</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Corrective Action Taken and Date</i>
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1926.405 (g) (2)	Flexible cords shall be used without splice or tap; strain relief shall be provided.			x	
1926.405 (b)	Electrical boxes, fittings shall have covers, faceplates or canopy and holes shall be smooth where cords pass through; and unused openings in cabinets/boxes shall be closed.	x			
1926.701 (b)	Reinforcing steel onto which employees could fall shall be guarded.			x	
1926.1053 (b) (1)	Portable ladder side rails extend at least 3 feet or be secured at top.			x	
1926.651 (j) (2)	Excavations shall have materials or equipment placed at least 2 feet from the edge.			x	
1926.651 (c) (2)	Excavations shall have a safe means of egress such as ladders, ramps, etc.	x			
1926.150 (c) (1)	Portable fire fighting equipment shall be provided and extinguishers shall be inspected periodically.			x	
1926.102 (a) (1)	Eye and face protection shall be provided.	x			
1926.300 (b) (2)	Guards for power tools shall be used and moving parts of equipment shall be guarded.	x			
1926.350 (a) (9)	Oxygen cylinders in storage shall be separated from fuel gas cylinders by at least 20 feet or a ½ fire resistance barrier.			x	

<i>Standard</i>	<i>Title</i>	In Compliance	Out of Compliance	N/A	<i>Corrective Action Taken and Date</i>
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1926.405 (a) (2) (ii) (e) & (f)	Temporary lights shall be protected from breakage, not suspended by their cords and extension cord.			X	
1926.405 (a) (2) (ii) (j)	Extension cords used with portable electric tools shall be of three wire type and designed for hard or extra hard usage.	x			
1926.105 (a)	Workplaces more than 25 feet above the ground or water shall have safety nets when ladder, safety line/belts, temporary floors, scaffolds, catch platform are not practical.			x	
1926.1051 (a)	Stairway or ladder shall be provided at all access points where there is a break in elevation of 19 inches or more.			x	
1926.451 (a) (2)	Scaffolding footing or anchorage shall be sound, rigid and capable of carrying the maximum intended load.			x	
1926.500 (c) (1) (old standard)	Wall opening shall be guarded.			x	
1926.404 (f) (7)	Electrical equipment connected by cord and plug shall be grounded except if there is an isolating transformer or the tool is double insulated.	x			
1926.556 (b) (2)	When working from an aerial lift, a full body harness and lanyard attached to the boom or basket.			x	
1926.501 (b) (1) (new standard)	Guardrails, safety nets or personal fall arrest system shall be used at 6 feet or more.			x	

Standard	Title	In Compliance	Out of Compliance	N/A	Corrective Action Taken and Date
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1926.451 (a) (14)	Scaffold planking shall extend over their end support not less than 6 inches and not more than 12 inches.			x	
1926.602 (a) (9)	Bi-directional earth moving equipment shall have audible alarms.	x			
1926.451 (a) (3)	Scaffolding shall be erected, moved, dismantled or altered under the supervision of a competent person.			x	
1926.550 (b) (2)	Cranes, crawler, truck or locomotive, shall meet the design, testing, maintenance, and operation per ANSI B30.5_1968. The most recent certification shall be on file until a new one is prepared.			x	

Comments:

Bi-weekly team meeting items: watch for hydraulic leaks, fuel spills, fluid containment. Discussed removing transite housing around south get away cables.

Newman continued excavation and earth work in S. E. zone, ended workday around 5 pm.

CVE fabricators continued to prepare forms for g-structures in S.E. zone.

4 pumps at compass points monitored air throughout the day.

3RD WEST SUBSTATION REMEDIATION PROJECT

HEALTH SAFETY MANAGER (HSM)

DAILY CHECKLIST

DATE: 10/26/11

General

- ☒ Work area Health and Safety Inspection
- NA Review and if necessary update Activity Hazard Analyses (AHA) based on planned site activities for the day
- ☒ Safety Planning or "Tailgate" mandatory meeting for all employees and contractors prior to commencement of any site work. Instruction, review hazards, health & safety issues and any modifications to the CSHASP
- NA Site hazard and safety instruction for all first time employees, contractors or visitors
- NA Complete Employee Meeting Record Form B (where applicable)
- NA Document required Respirator Training completion with Form H
- NA Record times and numbers of dump trucks and trailers as they leave the site with contaminated material.
- NA Confirm return of waste material manifest documents for each load with site manager.
- NA Complete all CSHASP Forms (for applicable activities planned for that day)
 - NA Illness/Injury Report Form A
 - NA Site-Specific Training Record Form C
 - NA Hot Work Permit Form D
 - NA Trench/Evacuation Permit Form E
 - NA Combined Space Entry Permit Form F
 - NA Exclusion zone operations are practiced as instructed.
 - NA Decontamination unit is working properly.
 - NA Workers are using decontamination unit as instructed.
 - NA Workers use personal protective equipment properly.
- ☒ Set air samples at cardinal compass points around exclusion zone. Check throughout the day to ensure proper operation.
- ☒ Observe control measures for dust and fugitive materials i.e. watering excavation sites and track out prevention.
- ☒ Review sign-in/sign-out log throughout and at the end of the workday.
- ☒ Secure the site at the end of the workday

Sampling

- NA Soil Confirmation sampling for any newly excavated areas
- ☒ Stationary Air Monitoring during contaminated soil removal around the perimeter of the exclusions zone
- NA Personal Breathing Zone Monitoring on personnel conducting contaminated dust and soil removal
- NA Digitally photograph each sample location and at any place field sampling personnel determined necessary

- NA Electronically file photo files into the on-site database
- ☒ Complete Field Documentation
 - ☒ Field Sample Data Sheets (FSDS)
 - ☒ Logbook
- NA On-site computer database
- ☒ Label each sample media with a unique number
- ☒ Seal sample(s) in zip lock plastic bags
- ☒ Complete and include Chain of Custody (COC) Form required for shipping of samples to appropriate laboratory
- ☒ Package samples for transport IAW SOP 2-1, Packaging and Shipping of Environmental Samples
- NA Review and disseminate sample results as received from the laboratories to Project Manager and other appropriate managers and employees
- NA Electronically file sample reports into on-site database



3rd West Substation Site Project Safety Audit

Project: 3rd West Sub Station

Date: 10/27/11

Location: 3rd West, 1st South, SLC

Job Number: _____

Survey Conducted By: Justin Kargis

Title: _____

Standard	Title	In Compliance	Out of Compliance	N/A	Corrective Action Taken and Date
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1926.59	Hazard Communication Program, List of Chemicals, Training, MSDSs.			x	
1926.500 (b) & (d) (old standard)	Guardrails on open sided floors, floor holes and runways.			x	
1926.404 (b)	Ground fault circuit interrupters or an assured equipment grounding conductor program in use.	x			
1926.451 (b)	The employer shall instruct each employee in the recognition and avoidance of unsafe conditions.			x	
1926.451 (d)	Tubular welded scaffolds shall be properly braced so that they are plumb, square and rigid; legs on plumb, adjustable, mud sills, etc. to support the maximum load; guardrails and toe boards shall be installed.			x	
1926.100 (a)	Head protection, where there is a possible danger of head injury.	x			

Standard	Title	In Compliance	Out of Compliance	N/A	Corrective Action Taken and Date
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1926.652 (a) (1)	Excavation protective systems; examination by competent person when less than 5 feet in depth.			x	
1926.20 (b) (2)	Employer responsibility to initiate and maintain safety and health programs.	x			
1926.20 (b) (1)	Employer responsibility to provide for frequent and regular inspections by designated competent persons.			x	
1926.451 (e)	Manually propelled scaffolds shall have tight planking for the full width, platforms secured, ladder or stairway provided, suitable footing, stand plumbs, wheels locked, guardrails and toe boards.			x	
1926.1052 (c) (1)	Stair rail and handrail along each unprotected edge.			x	
1926.25 (a)	Debris, scrap lumber with protruding nails, not cleared for work areas, stairs and around structures.			x	
1926.50	First aid shall be available in the absence of an infirmary, or other that is reasonably accessible; first aid supplies shall be accessible and telephone numbers posted.			x	
1926.451 (a) (13)	Scaffolding safe access not provided by ladder or equivalent.			x	
1926.651 (k) (1)	Excavations, protective systems, inspected daily by a competent person and as needed.			x	
1926.403 (b) (2)	Employer shall ensure electrical equipment is free from recognized hazards, is suitable, used in accordance with the listing, labeling or certification.	x			

Standard	Title	In Compliance	Out of Compliance	N/A	Corrective Action Taken and Date
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1926.451 (a) (4)	Scaffolding shall have guardrails and toe boards when more than 10 feet high and when less than 45 inches of work space.			x	
1926.405 (g) (2)	Flexible cords shall be used without splice or tap; strain relief shall be provided.			x	
1926.405 (b)	Electrical boxes, fittings shall have covers, faceplates or canopy and holes shall be smooth where cords pass through; and unused openings in cabinets/boxes shall be closed.	x			
1926.701 (b)	Reinforcing steel onto which employees could fall shall be guarded.			x	
1926.1053 (b) (1)	Portable ladder side rails extend at least 3 feet or be secured at top.			x	
1926.651 (j) (2)	Excavations shall have materials or equipment placed at least 2 feet from the edge.			x	
1926.651 (c) (2)	Excavations shall have a safe means of egress such as ladders, ramps, etc.	x			
1926.150 (c) (1)	Portable fire fighting equipment shall be provided and extinguishers shall be inspected periodically.			x	
1926.102 (a) (1)	Eye and face protection shall be provided.	x			
1926.300 (b) (2)	Guards for power tools shall be used and moving parts of equipment shall be guarded.	x			
1926.350 (a) (9)	Oxygen cylinders in storage shall be separated from fuel gas cylinders by at least 20 feet or a ½ fire resistance barrier.			x	

		In Compliance	Out of Compliance	N/A	
<i>Standard</i>	<i>Title</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Corrective Action Taken and Date</i>
1926.405 (a) (2) (ii) (e) & (f)	Temporary lights shall be protected from breakage, not suspended by their cords and extension cord.			X	
1926.405 (a) (2) (ii) (j)	Extension cords used with portable electric tools shall be of three wire type and designed for hard or extra hard usage.	x			
1926.105 (a)	Workplaces more than 25 feet above the ground or water shall have safety nets when ladder, safety line/belts, temporary floors, scaffolds, catch platform are not practical.			x	
1926.1051 (a)	Stairway or ladder shall be provided at all access points where there is a break in elevation of 19 inches or more.			x	
1926.451 (a) (2)	Scaffolding footing or anchorage shall be sound, rigid and capable of carrying the maximum intended load.			x	
1926.500 (c) (1) (old standard)	Wall opening shall be guarded.			x	
1926.404 (f) (7)	Electrical equipment connected by cord and plug shall be grounded except if there is an isolating transformer or the tool is double insulated.	x			
1926.556 (b) (2)	When working from an aerial lift, a full body harness and lanyard attached to the boom or basket.			x	
1926.501 (b) (1) (new standard)	Guardrails, safety nets or personal fall arrest system shall be used at 6 feet or more.			x	

		In Compliance	Out of Compliance	N/A	
Standard	Title	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Corrective Action Taken and Date
1926.451 (a) (14)	Scaffold planking shall extend over their end support not less than 6 inches and not more than 12 inches.			x	
1926.602 (a) (9)	Bi-directional earth moving equipment shall have audible alarms.	x			
1926.451 (a) (3)	Scaffolding shall be erected, moved, dismantled or altered under the supervision of a competent person.			x	
1926.550 (b) (2)	Cranes, crawler, truck or locomotive, shall meet the design, testing, maintenance, and operation per ANSI B30.5_1968. The most recent certification shall be on file until a new one is prepared.			x	

Comments:

Newman continued excavation and earth work in S. E. zone. A small amount of darker soil was uncovered and buried with clean fill near the east gate.

CVE fabricators poured foundations g-structures in S.E. zone.

Owen Wahlstrom came in to cover for Russ Johnson.

Neil Love off today.

4 pumps at compass points monitored air throughout the day.

3RD WEST SUBSTATION REMEDIATION PROJECT

HEALTH SAFETY MANAGER (HSM)

DAILY CHECKLIST

DATE: 10/27/11

General

- ☒ Work area Health and Safety Inspection
- NA Review and if necessary update Activity Hazard Analyses (AHA) based on planned site activities for the day
- NA Safety Planning or "Tailgate" mandatory meeting for all employees and contractors prior to commencement of any site work. Instruction, review hazards, health & safety issues and any modifications to the CSHASP
- NA Site hazard and safety instruction for all first time employees, contractors or visitors
- NA Complete Employee Meeting Record Form B (where applicable)
- NA Document required Respirator Training completion with Form H
- NA Record times and numbers of dump trucks and trailers as they leave the site with contaminated material.
- NA Confirm return of waste material manifest documents for each load with site manager.
- NA Complete all CSHASP Forms (for applicable activities planned for that day)
 - NA Illness/Injury Report Form A
 - NA Site-Specific Training Record Form C
 - NA Hot Work Permit Form D
 - NA Trench/Evacuation Permit Form E
 - NA Combined Space Entry Permit Form F
 - NA Exclusion zone operations are practiced as instructed.
 - NA Decontamination unit is working properly.
 - NA Workers are using decontamination unit as instructed.
 - NA Workers use personal protective equipment properly.
- ☒ Set air samples at cardinal compass points around exclusion zone. Check throughout the day to ensure proper operation.
- ☒ Observe control measures for dust and fugitive materials i.e. watering excavation sites and track out prevention.
- ☒ Review sign-in/sign-out log throughout and at the end of the workday.
- ☒ Secure the site at the end of the workday

Sampling

- NA Soil Confirmation sampling for any newly excavated areas
- ☒ Stationary Air Monitoring during contaminated soil removal around the perimeter of the exclusions zone
- NA Personal Breathing Zone Monitoring on personnel conducting contaminated dust and soil removal
- NA Digitally photograph each sample location and at any place field sampling personnel determined necessary

- NA Electronically file photo files into the on-site database
- ☒ Complete Field Documentation
 - ☒ Field Sample Data Sheets (FSDS)
 - ☒ Logbook
- NA On-site computer database
- ☒ Label each sample media with a unique number
- ☒ Seal sample(s) in zip lock plastic bags
- ☒ Complete and include Chain of Custody (COC) Form required for shipping of samples to appropriate laboratory
- ☒ Package samples for transport IAW SOP 2-1, Packaging and Shipping of Environmental Samples
- NA Review and disseminate sample results as received from the laboratories to Project Manager and other appropriate managers and employees
- NA Electronically file sample reports into on-site database



3rd West Substation Site Project Safety Audit

Project: 3rd West Sub Station

Date: 10/28/11

Location: 3rd West, 1st South, SLC

Job Number: _____

Survey Conducted By: Justin Kargis

Title: _____

Standard	Title	In Compliance	Out of Compliance	N/A	Corrective Action Taken and Date
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1926.59	Hazard Communication Program, List of Chemicals, Training, MSDSs.			x	
1926.500 (b) & (d) (old standard)	Guardrails on open sided floors, floor holes and runways.			x	
1926.404 (b)	Ground fault circuit interrupters or an assured equipment grounding conductor program in use.	x			
1926.451 (b)	The employer shall instruct each employee in the recognition and avoidance of unsafe conditions.			x	
1926.451 (d)	Tubular welded scaffolds shall be properly braced so that they are plumb, square and rigid; legs on plumb, adjustable, mud sills, etc. to support the maximum load; guardrails and toe boards shall be installed.			x	
1926.100 (a)	Head protection, where there is a possible danger of head injury.	x			

Standard	Title	In Compliance	Out of Compliance	N/A	Corrective Action Taken and Date
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
1926.652 (a) (1)	Excavation protective systems; examination by competent person when less than 5 feet in depth.			x	
1926.20 (b) (2)	Employer responsibility to initiate and maintain safety and health programs.	x			
1926.20 (b) (1)	Employer responsibility to provide for frequent and regular inspections by designated competent persons.			x	
1926.451 (e)	Manually propelled scaffolds shall have tight planking for the full width, platforms secured, ladder or stairway provided, suitable footing, stand plumbs, wheels locked, guardrails and toe boards.			x	
1926.1052 (c) (1)	Stair rail and handrail along each unprotected edge.			x	
1926.25 (a)	Debris, scrap lumber with protruding nails, not cleared for work areas, stairs and around structures.			x	
1926.50	First aid shall be available in the absence of an infirmary, or other that is reasonably accessible; first aid supplies shall be accessible and telephone numbers posted.			x	
1926.451 (a) (13)	Scaffolding safe access not provided by ladder or equivalent.			x	
1926.651 (k) (1)	Excavations, protective systems, inspected daily by a competent person and as needed.			x	
1926.403 (b) (2)	Employer shall ensure electrical equipment is free from recognized hazards, is suitable, used in accordance with the listing, labeling or certification.	x			

		In Compliance	Out of Compliance	N/A	
<i>Standard</i>	<i>Title</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Corrective Action Taken and Date</i>
1926.451 (a) (4)	Scaffolding shall have guardrails and toe boards when more than 10 feet high and when less than 45 inches of work space.			x	
1926.405 (g) (2)	Flexible cords shall be used without splice or tap; strain relief shall be provided.			x	
1926.405 (b)	Electrical boxes, fittings shall have covers, faceplates or canopy and holes shall be smooth where cords pass through; and unused openings in cabinets/boxes shall be closed.	x			
1926.701 (b)	Reinforcing steel onto which employees could fall shall be guarded.			x	
1926.1053 (b) (1)	Portable ladder side rails extend at least 3 feet or be secured at top.			x	
1926.651 (j) (2)	Excavations shall have materials or equipment placed at least 2 feet from the edge.			x	
1926.651 (c) (2)	Excavations shall have a safe means of egress such as ladders, ramps, etc.	x			
1926.150 (c) (1)	Portable fire fighting equipment shall be provided and extinguishers shall be inspected periodically.			x	
1926.102 (a) (1)	Eye and face protection shall be provided.	x			
1926.300 (b) (2)	Guards for power tools shall be used and moving parts of equipment shall be guarded.	x			
1926.350 (a) (9)	Oxygen cylinders in storage shall be separated from fuel gas cylinders by at least 20 feet or a ½ fire resistance barrier.			x	

		In Compliance	Out of Compliance	N/A	
<i>Standard</i>	<i>Title</i>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<i>Corrective Action Taken and Date</i>
1926.405 (a) (2) (ii) (e) & (f)	Temporary lights shall be protected from breakage, not suspended by their cords and extension cord.			X	
1926.405 (a) (2) (ii) (j)	Extension cords used with portable electric tools shall be of three wire type and designed for hard or extra hard usage.	x			
1926.105 (a)	Workplaces more than 25 feet above the ground or water shall have safety nets when ladder, safety line/ belts, temporary floors, scaffolds, catch platform are not practical.			x	
1926.1051 (a)	Stairway or ladder shall be provided at all access points where there is a break in elevation of 19 inches or more.			x	
1926.451 (a) (2)	Scaffolding footing or anchorage shall be sound, rigid and capable of carrying the maximum intended load.			x	
1926.500 (c) (1) (old standard)	Wall opening shall be guarded.			x	
1926.404 (f) (7)	Electrical equipment connected by cord and plug shall be grounded except if there is an isolating transformer or the tool is double insulated.	x			
1926.556 (b) (2)	When working from an aerial lift, a full body harness and lanyard attached to the boom or basket.			x	
1926.501 (b) (1) (new standard)	Guardrails, safety nets or personal fall arrest system shall be used at 6 feet or more.			x	

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Standard	Title	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Corrective Action Taken and Date
1926.451 (a) (14)	Scaffold planking shall extend over their end support not less than 6 inches and not more than 12 inches.			x	
1926.602 (a) (9)	Bi-directional earth moving equipment shall have audible alarms.	x			
1926.451 (a) (3)	Scaffolding shall be erected, moved, dismantled or altered under the supervision of a competent person.			x	
1926.550 (b) (2)	Cranes, crawler, truck or locomotive, shall meet the design, testing, maintenance, and operation per ANSI B30.5_1968. The most recent certification shall be on file until a new one is prepared.			x	

Comments:

Newman continued excavation and earth work in S. E. zone, ended workday around 2pm.

CVE fabricators poured floor for control building in zone 1.

Owen Wahlstrom on site to cover for Russ Johnson.

Neil Love off today.

4 pumps at compass points monitored air throughout the day.

3RD WEST SUBSTATION REMEDIATION PROJECT

HEALTH SAFETY MANAGER (HSM)

DAILY CHECKLIST

DATE: 10/28/11

General

- ☒ Work area Health and Safety Inspection
- NA Review and if necessary update Activity Hazard Analyses (AHA) based on planned site activities for the day
- NA Safety Planning or "Tailgate" mandatory meeting for all employees and contractors prior to commencement of any site work. Instruction, review hazards, health & safety issues and any modifications to the CSHASP
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- NA Document required Respirator Training completion with Form H
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- NA Confirm return of waste material manifest documents for each load with site manager.
- NA Complete all CSHASP Forms (for applicable activities planned for that day)
 - NA Illness/Injury Report Form A
 - NA Site-Specific Training Record Form C
 - NA Hot Work Permit Form D
 - NA Trench/Evacuation Permit Form E
 - NA Combined Space Entry Permit Form F
 - NA Exclusion zone operations are practiced as instructed.
 - NA Decontamination unit is working properly.
 - NA Workers are using decontamination unit as instructed.
 - NA Workers use personal protective equipment properly.
- ☒ Set air samples at cardinal compass points around exclusion zone. Check throughout the day to ensure proper operation.
- ☒ Observe control measures for dust and fugitive materials i.e. watering excavation sites and track out prevention.
- ☒ Review sign-in/sign-out log throughout and at the end of the workday.
- ☒ Secure the site at the end of the workday

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- NA Soil Confirmation sampling for any newly excavated areas
- ☒ Stationary Air Monitoring during contaminated soil removal around the perimeter of the exclusions zone
- NA Personal Breathing Zone Monitoring on personnel conducting contaminated dust and soil removal
- NA Digitally photograph each sample location and at any place field sampling personnel determined necessary

- NA Electronically file photo files into the on-site database
- ☒ Complete Field Documentation
 - ☒ Field Sample Data Sheets (FSDS)
 - ☒ Logbook
- NA On-site computer database
- ☒ Label each sample media with a unique number
- ☒ Seal sample(s) in zip lock plastic bags
- ☒ Complete and include Chain of Custody (COC) Form required for shipping of samples to appropriate laboratory
- ☒ Package samples for transport IAW SOP 2-1, Packaging and Shipping of Environmental Samples
- NA Review and disseminate sample results as received from the laboratories to Project Manager and other appropriate managers and employees
- NA Electronically file sample reports into on-site database



PHOTO 1



PHOTO 2



PHOTO 3



PHOTO 4

R & R Environmental, Inc.

47 West 9000 South, Suite #2, Sandy, Utah 84070
(801) 352-2380 • Fax: (801) 352-2381

PROJECT NO:

DESIGNED BY:

SCALE:

REVIEWED BY:
DCR

DRAWN BY:
JRWC

DATE:
10/24/2011

FILE:

SITE PHOTOGRAPHS



**3rd West Substation
"2011 Upgrade Project"
Salt Lake City, Utah**



PHOTO 1



PHOTO 2



PHOTO 3

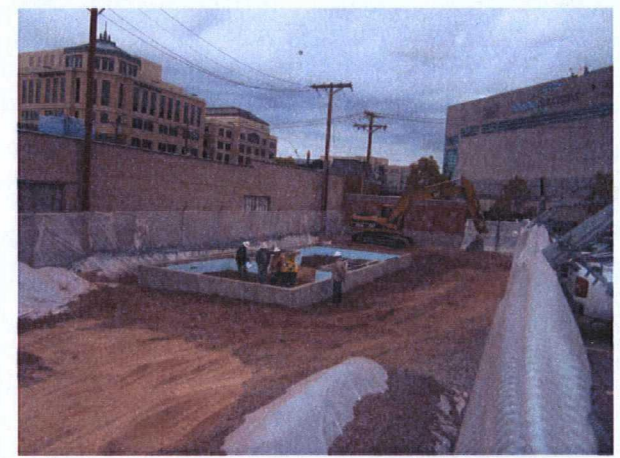


PHOTO 4

R & R Environmental, Inc.

47 West 9000 South, Suite #2, Sandy, Utah 84070
(801) 352-2380 • Fax: (801) 352-2381

PROJECT NO:

DESIGNED BY:

SCALE:

REVIEWED BY:
DCR

DRAWN BY:

JRWC

DATE:

10/25/2011

FILE:

SITE PHOTOGRAPHS



**3rd West Substation
"2011 Upgrade Project"
Salt Lake City, Utah**



PHOTO 1



PHOTO 2

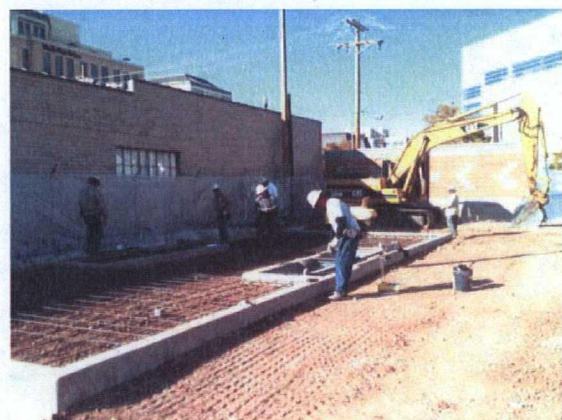


PHOTO 3

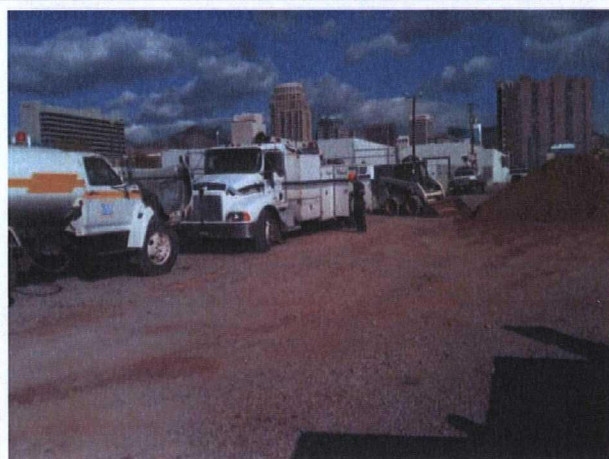


PHOTO 4

R & REnvironmental, Inc.

47 West 9000 South, Suite #2, Sandy, Utah 84070
(801) 352-2380 • Fax: (801) 352-2381

PROJECT NO:

DESIGNED BY:

SCALE:

REVIEWED BY:

DCR

DRAWN BY:

JMK

DATE

10/26/2011

FILE:

SITE PHOTOGRAPHS



3rd West Substation
"2011 Upgrade Project"
Salt Lake City, Utah



PHOTO 1



PHOTO 2

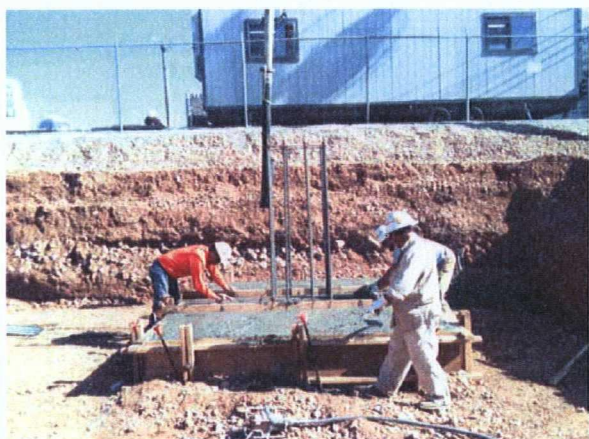


PHOTO 3



PHOTO 4

R & REnvironmental, Inc.

47 West 9000 South, Suite #2, Sandy, Utah 84070
(801) 352-2380 • Fax: (801) 352-2381

PROJECT NO:

DESIGNED BY:

SCALE:

REVIEWED BY:
DCR

DRAWN BY:
JMK

DATE
10/27/2011

FILE:

SITE PHOTOGRAPHS



**3rd West Substation
"2011 Upgrade Project"
Salt Lake City, Utah**



PHOTO 1



PHOTO 2



PHOTO 3



PHOTO 4

R & REnvironmental, Inc.

47 West 9000 South, Suite #2, Sandy, Utah 84070
(801) 352-2380 • Fax: (801) 352-2381

PROJECT NO:

DESIGNED BY:

SCALE:

REVIEWED BY:

DCR

DRAWN BY:

JMK

DATE

10/28/2011

FILE:

SITE PHOTOGRAPHS



**3rd West Substation
"2011 Upgrade Project"
Salt Lake City, Utah**

PACIFICORP OPERATIONS - Field Construction Representative Daily Log

PROJECT NAME: Third West Sub - Rebuild

DATE: Monday, October 24, 2011

PO & Work Order NO. : 3000078050 / 10035803

MAIN CONTRACTOR: Cache Valley Electric

Crew Start Time: 6:40

Crew Stop Time: 17:20

Tot Hrs mns: 10:40

FCR Start Time: 6:45

FCR Stop Time: 17:25

Tot Hrs mns: 10:40

Use military time format 00:00

WEATHER CONDITIONS: Sunny - 65 degrees

DESCRIPTION: (work performed, general comments, instructions to contractor, # of crew members onsite.)

R&R set up four monitors. CVE crew broke off the form ties on the foundation and grouted the voids, tied rebar for the spread footings. Newman backfilled the soft spot in the excavation and is working on backfilling inside and outside the new building foundation. Newman brought the inside grade up to the grade where the conduits run from vault to vault and CVE has installed the ten conduits. Newman will then backfill them with sand to minimize the potential for breaking the conduits. PSI came by to test the soft spot and has OK'd it for placement of spread footings. They will be back later in the week to witness the completion of the entire excavation. H&E equipment came on-site to repair a hydraulic leak on the forklift. After a discussion with Brent Wiggins I authorized Newman to backfill the west side of the pull box with sand in the bottom of the void, but to make sure that structural fill is used from a grade of 6" under and around the fence posts. CVE Safety Director stopped by to visit with his folks and review site safety and housekeeping on the site. Contractors: CVE = 8, R&R = 1, Wilding = 1, PSI = 1.

IF WORKING IN ENERGIZED SUBSTATION:

Dispatcher login, name and time: Al Swinski 0710

Dispatcher logout, name and time: Barry Nielson 1725

DISCREPANCIES:

IMMEDIATE CORRECTIVE ACTION TAKEN:

DELAYS OR LOST TIME ENCOUNTERED:

--

EQUIPMENT (working, delivered, idle):

Portable toilet (2), forklift, 2 dumpsters, office trailer, conex, exclusion zone conex (2), water wagon, portable wash-down structure, trackhoe, trackhoe w/pavement breaker, mini-ex, bobcat, power washer, water truck, compactor, CVE tool trailer, crew truck, backhoe.

OSHA Recordable Safety Incidents:

Reported by: Time:

--	--	--



Russ Johnson

Field Construction Representative

PACIFICORP OPERATIONS - Field Construction Representative Daily Log

PROJECT NAME: Third West Sub - Rebuild

DATE: Wednesday, October 26, 2011

PO & Work Order NO.: 3000078050 / 10035803

MAIN CONTRACTOR: Cache Valley Electric

Crew Start Time: 6:50

Crew Stop Time: 17:20

Tot Hrs mns: 10:30

FCR Start Time: 6:40

FCR Stop Time: 17:20

Tot Hrs mns: 10:40

Use military time format 00:00

WEATHER CONDITIONS: _____

DESCRIPTION: (work performed, general comments, instructions to contractor, # of crew members onsite.)

R&R set up four monitors. CVE continues tying rebar and making forms for the spread footings. CVE laid out six of the eight spread footings in the excavated area and completed grading forms and placing rebar. CVE placed rebar for the floor of the control building and will place the unistrut inserts for the floor on Thursday. CVE expects to pour the mats for the six spread footings at noon on Thursday and the floor of the control building at 11:00 on Friday. Newman completed backfilling inside the control building and continues backfilling the outside of the building foundation. Wagstaff Crane representative came by today to look at the pick for the Trachte building on November 7. Contractors: CVE = 8, R&R = 1, Wilding = 1.

IF WORKING IN ENERGIZED SUBSTATION:

Dispatcher login, name and time: Al Swinski 0640

Dispatcher logout, name and time: Jim Bowman 1720

DISCREPANCIES:

IMMEDIATE CORRECTIVE ACTION TAKEN:

DELAYS OR LOST TIME ENCOUNTERED:

Water truck was down today, MESCO came by in the PM and repaired it.

EQUIPMENT (working, delivered, idle):

Portable toilet (2), forklift, 2 dumpsters, office trailer, conex, exclusion zone conex (2), water wagon, portable wash-down structure, trackhoe, trackhoe w/pavement breaker, mini-ex, bobcat, power washer, water truck, compactor, CVE tool trailer, crew truck, backhoe.

OSHA Recordable Safety Incidents:

Reported by:

Time:



Russ Johnson

Field Construction Representative

PACIFICORP OPERATIONS - Field Construction Representative Daily Log

PROJECT NAME: Third West Sub - Rebuild

DATE : Thursday, October 27, 2011

PO & Work Order NO. : 3000078050 / 10035803

MAIN CONTRACTOR : Cache Valley Electric

Crew Start Time: 6:50

Crew Stop Time: 16:30

Tot Hrs mns: 9:40

FCR Start Time: 6:40

FCR Stop Time: 16:30

Tot Hrs mns: 9:50

Use military time format 00:00

WEATHER CONDITIONS: 10:00, 42F, 0 wind, 70% high thin cloud cover

DESCRIPTION: (work performed, general comments, instructions to contractor, # of crew members onsite.)

R&R set up four monitors. CVE set unistrut embeds in the control building floor and completing preparations for pouring the six spread footing mats. Newman completed backtilling the outside of the control building and moved over to the excavation area for the two additional spread footings and the east transformer. Contractors: CVE = 7, R&R = 1, Wilding = 1.

Six spread footers poured.

IF WORKING IN ENERGIZED SUBSTATION:

Dispatcher login, name and time: Al Swinski 0658

Dispatcher logout, name and time: Kim Batt 16:11

DISCREPANCIES:

IMMEDIATE CORRECTIVE ACTION TAKEN:

DELAYS OR LOST TIME ENCOUNTERED:

--

EQUIPMENT (working, delivered, idle):

Portable toilet (2), forklift, 2 dumpsters, office trailer, conex, exclusion zone conex (2), water wagon, portable wash-down structure, trackhoe, trackhoe w/pavement breaker, mini-ex, bobcat, power washer, water truck, compactor, CVE tool trailer, crew truck, backhoe.

OSHA Recordable Safety Incidents:

Reported by:

Time:



Russ Johnson/Owen Wahlstrom

Field Construction Representative

PACIFICORP OPERATIONS - Field Construction Representative Daily Log

PROJECT NAME: Third West Sub - Rebuild

DATE : Thursday, October 28, 2011

PO & Work Order NO. : 3000078050 / 10035803

MAIN CONTRACTOR : Cache Valley Electric

Crew Start Time: 7:00

Crew Stop Time: 17:30

Tot Hrs mns: 10:30

FCR Start Time: 7:00

FCR Stop Time: 17:30

Tot Hrs mns: 10:30

Use military time format 00:00

WEATHER CONDITIONS: 6:40, 38F, 0 wind, stars in the sky

DESCRIPTION: (work performed, general comments, instructions to contractor, # of crew members onsite.)

R&R set up four monitors. CVE stripping forms, poured floor for control building. Newman working on excavation for two additional spread footings, the east transformer, removing spoils. Contractors: CVE = 8, R&R = 1, Wilding = 1, Newman=4.

IF WORKING IN ENERGIZED SUBSTATION:

Dispatcher login, name and time: Gus Montinez 6:40

Dispatcher logout, name and time: Kim Batt 17:30

DISCREPANCIES:

IMMEDIATE CORRECTIVE ACTION TAKEN:

DELAYS OR LOST TIME ENCOUNTERED:

EQUIPMENT (working, delivered, idle):

Portable toilet (2), forklift, 2 dumpsters, office trailer, conex, exclusion zone conex (2), water wagon, portable wash-down structure, trackhoe, trackhoe w/pavement breaker, mini-ex, bobcat, power washer, water truck, compactor, CVE tool trailer, crew truck, backhoe, dump truck.

OSHA Recordable Safety Incidents:

Reported by:

Time:



Russ Johnson/Owen Wahlstrom

Field Construction Representative

PACIFICORP OPERATIONS - Field Construction Representative Daily Log

PROJECT NAME: Third West Sub - Rebuild

DATE : Monday, October 24, 2011

PO & Work Order NO. : 3000078050 / 10035803

MAIN CONTRACTOR : Cache Valley Electric

Crew Start Time: 6:40

Crew Stop Time: 17:20

Tot Hrs mns: 10:40

FCR Start Time: 6:45

FCR Stop Time: 17:25

Tot Hrs mns: 10:40

Use military time format 00:00

WEATHER CONDITIONS: Sunny - 65 degrees

DESCRIPTION: (work performed, general comments, instructions to contractor, # of crew members onsite.)

R&R set up four monitors. CVE crew broke off the form ties on the foundation and grouted the voids, tied rebar for the spread footings. Newman backfilled the soft spot in the excavation and is working on backfilling inside and outside the new building foundation. Newman brought the inside grade up to the grade where the conduits run from vault to vault and CVE has installed the ten conduits. Newman will then backfill them with sand to minimize the potential for breaking the conduits. PSI came by to test the soft spot and has OK'd it for placement of spread footings. They will be back later in the week to witness the completion of the entire excavation. H&E equipment came on-site to repair a hydraulic leak on the forklift. After a discussion with Brent Wiggins I authorized Newman to backfill the west side of the pull box with sand in the bottom of the void, but to make sure that structural fill is used from a grade of 6" under and around the fence posts. CVE Safety Director stopped by to visit with his folks and review site safety and housekeeping on the site. Contractors: CVE = 8, R&R = 1, Wilding = 1, PSI = 1.

IF WORKING IN ENERGIZED SUBSTATION:

Dispatcher login, name and time: Al Swinski 0710

Dispatcher logout, name and time: Barry Nielson 1725

DISCREPANCIES:

IMMEDIATE CORRECTIVE ACTION TAKEN:

DELAYS OR LOST TIME ENCOUNTERED:

EQUIPMENT (working, delivered, idle):

Portable toilet (2), forklift, 2 dumpsters, office trailer, conex, exclusion zone conex (2), water wagon, portable wash-down structure, trackhoe, trackhoe w/pavement breaker, mini-ex, bobcat, power washer, water truck, compactor, CVE tool trailer, crew truck, backhoe.

OSHA Recordable Safety Incidents:

Reported by: Time:



Russ Johnson
Field Construction Representative

PROJECT NAME: <u>Third West Sub - Rebuild</u>		DATE : <u>Tuesday, October 25, 2011</u>
PO & Work Order NO. : <u>3000078050 / 10035803</u>		MAIN CONTRACTOR : <u>Cache Valley Electric</u>

DATE : Tuesday, October 25, 2011

MAIN CONTRACTOR : Cache Valley Electric

FCR Stop Time: _____ **Tot Hrs mns:** 17:15

WEATHER CONDITIONS: Cloudy - 50 degrees

R&R set up four monitors. CVE continues tying rebar and making forms for the spread footings. Newman placed sand around the 6" conduits running between the vaults in the control building and continues backtilling inside and outside the building foundation. Contractors CVE = 8, R&R = 1, Wilding = 1.

Dispatcher login, name and time:	Al Swinski 0645
Dispatcher logout, name and time:	

--

Portable toilet (2), forklift, 2 dumpsters, office trailer, conex , exclusion zone conex (2), water wagon, portable wash-down structure, trackhoe, trackhoe w/pavement breaker, mini-ex, bobcat, power washer, water truck, compactor, CVE tool trailer, crew truck, backhoe.



PACIFICORP OPERATIONS - Field Construction Representative Daily Log

PROJECT NAME: Third West Sub - Rebuild

DATE: Wednesday, October 26, 2011

PO & Work Order NO.: 3000078050 / 10035803

MAIN CONTRACTOR: Cache Valley Electric

Crew Start Time: 6:50

Crew Stop Time: 17:20

Tot Hrs mns: 10:30

FCR Start Time: 6:40

FCR Stop Time: 17:20

Tot Hrs mns: 10:40

Use military time format 00:00

WEATHER CONDITIONS: _____

DESCRIPTION: (work performed, general comments, instructions to contractor, # of crew members onsite.)

R&R set up four monitors. CVE continues tying rebar and making forms for the spread footings. CVE laid out six of the eight spread footings in the excavated area and completed grading forms and placing rebar. CVE placed rebar for the floor of the control building and will place the unistrut inserts for the floor on Thursday. CVE expects to pour the mats for the six spread footings at noon on Thursday and the floor of the control building at 11:00 on Friday. Newman completed backfilling inside the control building and continues backfilling the outside of the building foundation. Wagstaff Crane representative came by today to look at the pick for the Trachte building on November 7. Contractors: CVE = 8, R&R = 1, Wilding = 1.

IF WORKING IN ENERGIZED SUBSTATION:

Dispatcher login, name and time: Al Swinski 0640

Dispatcher logout, name and time: Jim Bowman 1720

DISCREPANCIES:

IMMEDIATE CORRECTIVE ACTION TAKEN:

DELAYS OR LOST TIME ENCOUNTERED:

Water truck was down today, MESCO came by in the PM and repaired it.

EQUIPMENT (working, delivered, idle):

Portable toilet (2), forklift, 2 dumpsters, office trailer, conex, exclusion zone conex (2), water wagon, portable wash-down structure, trackhoe, trackhoe w/pavement breaker, mini-ex, bobcat, power washer, water truck, compactor, CVE tool trailer, crew truck, backhoe.

OSHA Recordable Safety Incidents:

Reported by:

Time:



Russ Johnson

Field Construction Representative

PACIFICORP OPERATIONS - Field Construction Representative Daily Log

PROJECT NAME: Third West Sub - Rebuild

DATE : Thursday, October 27, 2011

PO & Work Order NO. : 3000078050 / 10035803

MAIN CONTRACTOR : Cache Valley Electric

Crew Start Time: 6:50

Crew Stop Time: 16:30

Tot Hrs mns: 9:40

FCR Start Time: 6:40

FCR Stop Time: 16:30

Tot Hrs mns: 9:50

Use military time format 00:00

WEATHER CONDITIONS: 10:00, 42F, 0 wind, 70% high thin cloud cover

DESCRIPTION: (work performed, general comments, instructions to contractor, # of crew members onsite.)

R&R set up four monitors. CVE set unistrut embeds in the control building floor and completing preparations for pouring the six spread footing mats. Newman completed backtilling the outside of the control building and moved over to the excavation area for the two additional spread footings and the east transformer. Contractors: CVE = 7, R&R = 1, Wilding = 1.

Six spread footers poured.

IF WORKING IN ENERGIZED SUBSTATION:

Dispatcher login, name and time: Al Swinski 0658

Dispatcher logout, name and time: Kim Batt 16:11

DISCREPANCIES:

IMMEDIATE CORRECTIVE ACTION TAKEN:

DELAYS OR LOST TIME ENCOUNTERED:

--

EQUIPMENT (working, delivered, idle):

Portable toilet (2), forklift, 2 dumpsters, office trailer, conex, exclusion zone conex (2), water wagon, portable wash-down structure, trackhoe, trackhoe w/pavement breaker, mini-ex, bobcat, power washer, water truck, compactor, CVE tool trailer, crew truck, backhoe.

OSHA Recordable Safety Incidents:

Reported by:

Time:



Russ Johnson/Owen Wahlstrom

Field Construction Representative

PACIFICORP OPERATIONS - Field Construction Representative Daily Log

PROJECT NAME: Third West Sub - Rebuild

DATE : Thursday, October 28, 2011

PO & Work Order NO. : 3000078050 / 10035803

MAIN CONTRACTOR : Cache Valley Electric

Crew Start Time: 7:00

Crew Stop Time: 17:30

Tot Hrs mns: 10:30

FCR Start Time: 7:00

FCR Stop Time: 17:30

Tot Hrs mns: 10:30

Use military time format 00:00

WEATHER CONDITIONS: 6:40, 38F, 0 wind, stars in the sky

DESCRIPTION: (work performed, general comments, instructions to contractor, # of crew members onsite.)

R&R set up four monitors. CVE stripping forms, poured floor for control building. Newman working on excavation for two additional spread footings, the east transformer, removing spoils. Contractors: CVE = 8, R&R = 1, Wilding = 1, Newman=4.

IF WORKING IN ENERGIZED SUBSTATION:

Dispatcher login, name and time: Gus Montinez 6:40

Dispatcher logout, name and time: Kim Batt 17:30

DISCREPANCIES:

IMMEDIATE CORRECTIVE ACTION TAKEN:

DELAYS OR LOST TIME ENCOUNTERED:

--

EQUIPMENT (working, delivered, idle):

Portable toilet (2), forklift, 2 dumpsters, office trailer, conex, exclusion zone conex (2), water wagon, portable wash-down structure, trackhoe, trackhoe w/pavement breaker, mini-ex, bobcat, power washer, water truck, compactor, CVE tool trailer, crew truck, backhoe, dump truck.

OSHA Recordable Safety Incidents:

Reported by:

Time:

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Russ Johnson/Owen Wahlstrom
Field Construction Representative



Reservoirs Environmental, Inc.

October 26, 2011

David Roskelley
R & R Environmental
47 West 9000 South #2
Sandy UT 84070

Laboratory Code:	RES
Subcontract Number:	NA
Laboratory Report:	RES 223070-1
Project # / P.O. #	None Given
Project Description:	3rd West Substation- PacifiCorp

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 223070-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

Jeanne Spencer Orr
President

RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0; TDH: #30-0015

TABLE I. TEM AIR FILTER SAMPLE DATA AND ANALYTICAL RESULTS

RES Job Number: RES 223070-1
 Client: R & R Environmental
 Client Project Number / P.O.: None Given
 Client Project Description: 3rd West Substation-PacifiCorp
 Date Samples Received: October 25, 2011
 Analysis Type: TEM, AHERA
 Turnaround: 24 Hour
 Date Samples Analyzed: October 25, 2011

Client ID Number	Lab ID Number	Area Analyzed (mm ²)	Air Volume Sampled (L)	Number of Asbestos Structures Detected	Analytical Sensitivity (s/cc)	Asbestos Concentration (s/cc)	Filter Loading (s/mm ²)
3W-102411-N	EM 814325	0.0770	1106	ND	0.0045	BAS	BAS
3W-102411-S	EM 814326	0.0770	1116	ND	0.0045	BAS	BAS
3W-102411-E	EM 814327	0.0770	1112	ND	0.0045	BAS	BAS
3W-102411-W	EM 814328	0.0770	1112	ND	0.0045	BAS	BAS
Blank	EM 814329	NA	0	NA	---	---	---
Blank	EM 814330	NA	0	NA	---	---	---

NA = Not Analyzed
 ND = None Detected
 BAS = Below Analytical Sensitivity
 Average Grid Opening in mm² = 0.011

Filter Material = Mixed Cellulose Ester
 Filter Diameter = 25 mm -
 Effective Filter Area = 385 sq mm

gfr
 Digitally signed by gfr
 DN: cn=gfr, o=RESERVOIRS ENVIRONMENTAL, INC., email=gfr@reservoirsenv.com, c=US
 2011.10.25
 07:30:56 -0400

DATA QA

Due Date: 10-26
Due Time: 835

RES 223070

REI LAB Reservoirs Environmental, Inc.

5801 Logan St. Denver, CO 80216 • Ph: 303 864-1986 • Fax 303-477-4275 • Toll Free: 866 RESI-ENV

Pager: 303-509-2058

Page 1 of 1

INVOICE TO: (IF DIFFERENT)

CONTACT INFORMATION:

Company: <u>REI Environmental, Inc.</u>	Company: <u>DAVE</u>	Contact: <u>DAVE BOFFELLEY</u>	Contact:
Address: <u>47 W 9000S, #13</u>	Address:	Phone: <u>801.541.1035</u>	Phone:
<u>Smoky, UT 84070</u>		Fax:	Fax:
		Cell/pager:	Cell/pager:
Project Number and/or P.O. #:		Final Date Deliverable ENVI Address:	
Project Description/Location: <u>3rd West Substation - Paul Corp</u>		<u>DAVE@REIENVIRO.COM</u>	

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm		REQUESTED ANALYSIS												VALID MATRIX CODES				LAB NOTES:			
PLM / PCM / TEM <u>TEM</u> <u>RUSH</u> (Same Day) <u>PRIORITY</u> (Next Day) <u>STANDARD</u> (Rush PCM = 2hr, TEM = 6hr.)		PLM - Short report, Long report, Point Count	TEM - AHERA, Level II, 7402, ISO, +/-, Quant, Semi-quant, Micro-sec, ISO-Indirect Presps	PCM - 7400A, 7400B, OSHA	DUST - Total, Respirable	METALS - Analysis(s)	RCRA 8, TCLP, Welding Fume, Metals Scan	ORGANICS - METH	Salmonella: +/-	E.coli O157:H7: +/-	Listeria: +/-	Aerobic Plate Count: +/- or Quantification	E.coli: +/- or Quantification	Coliforms: +/- or Quantification	S.aureus: +/- or Quantification	Y & M: +/- or Quantification	Mold: +/-, Identification, Quantification	Air = A		Bulk = B	
CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 8pm																		Dust = D		Paint = P	
Metal(s) / Dust <u>RUSH</u> 24 hr. 3-6 Day																		Sol = S		Wipe = W	
RCRA 8 / Metals & Welding <u>RUSH</u> S day 10 day																		8wab = SW		F = Food	
Fume Scan / TCLP <u>RUSH</u> S day 10 day																		Drinking Water = DW		Waste Water = WW	
Organics <u>24 hr.</u> S day S Day		O = Other																			
MICROBIOLOGY LABORATORY HOURS: Weekdays: 8am - 6pm																					
E.coli O157:H7, Coliforms, S.aureus <u>24 hr.</u> 2 Day 3-5 Day																					
Salmonella, Listeria, E.coli, APC, YAM <u>48 Hr.</u> 3-6 Day																					
Mold <u>RUSH</u> 24 Hr 48 Hr S Day S Day																					
Turnaround times establish a laboratory priority, subject to laboratory vetting and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.																					
Special Instructions:																					
Client sample ID number (Sample ID's must be unique)																					
1	<u>3W-102411-H</u>	<u>Area</u>																	<u>814 325</u>		
2	<u>-B</u>																		<u>26</u>		
3	<u>-E</u>																		<u>27</u>		
4	<u>-W</u>																		<u>28</u>		
5	<u>Blank</u>																		<u>29</u>		
6	<u>Blank</u>																		<u>30</u>		
7																					
8																					
9																					
10																					

Number of samples received: _____ (Additional samples shall be listed on attached long term.)

NOTE: REI will analyze incoming samples based upon information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain-of-Custody shall constitute an analytical services agreement with payment terms of NET 30 days, failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By: <u>[Signature]</u>	Date/Time: <u>10/24/11</u>	1800	Sample Condition: On Ice Sealed Intact
Laboratory Use Only	Date/Time: <u>10-25-11</u>	<u>835</u>	Temp. (F°) <u> </u> Yes / No Yes / No Yes / No
Received By: <u>[Signature]</u>	Carrier: <u>FedEx</u>		
Results:	Contact Phone Email Fax Date Time Initials	Contact Phone Email Fax Date Time Initials	
	Contact Phone Email Fax Date Time Initials	Contact Phone Email Fax Date Time Initials	

TRK# 753 3080 5294

Attachment I

Key to Count Sheets Count Sheets Analytical Procedures

Structures identifications consist of an Asbestos Type followed by a Structure Type

Asbestos Type

A = Amosite
An = Anthophyllite
C = Chrysotile
Cr = Crocidolite
T = Tremolite

Structure Types

F = Fiber
B = Bundle
C = Cluster
M = Matrix

ND = no structures detected
M = other structure associated with a matrix
NAM = Non Asbestos Mineral
XGB = partly obscured by a grid bar

Sizing Conversion

1 length unit = 5 mm on screen = 0.278 micron

1.80 length units = 0.5 micron

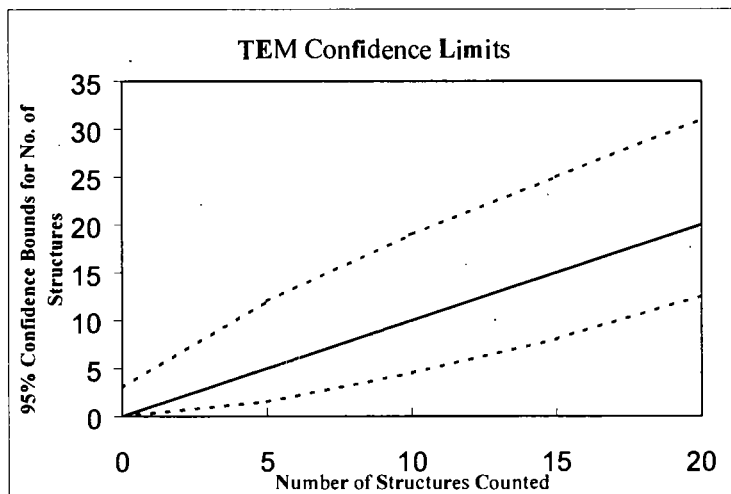
18.0 length units = 5 microns

1 width unit = 1 mm on screen = 0.0556 micron

TEM Analysts

Jeanne S. Orr
Nathan DelHiero
Angela Heitger
Jonathan Bemard

Paul D. LoScalzo
Mark Steiner
Norberto Zimbleman
Robert Workman



Upper and lower 95% confidence bounds for the number of structures counted assuming a Poisson distribution.

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N S
Voltage (KV)	100 KV
Magnification	2010X 10KX
Grid opening area (mm ²)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm ²)	385
Secondary Filter Area (mm ²)	N/A
QA Type	not QA

Client:	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm ²)	1106
Date received by lab	10/25/11
Lab Job Number:	223070
Lab Sample Number:	814325

Analyzed by	JK
Analysis date	10/25/11
Method (D=Direct, I=Indirect, IA=indirect, ashed)	D
Counting mles (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	H5-3	ND												
	G5-3	ND					Prep A	80% intact		1-3% debris				
	F5-3	ND					Prep B	N/A						
	E5-3	ND								Prep B from 10/25/11				
B	G4-3	ND												
	F4-3	ND												
	E4-3	ND												

Rev 3-2009

IA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material

Reservoir Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm ²)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm ²)	385
Secondary Filter Area (mm ²)	N/A
QA Type	not QA

Client:	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm ²)	1116
Date received by lab	10/25/11
Lab Job Number	223070
Lab Sample Number:	814326

Analyzed by	HL
Analysis date	10/25/11
Method (D=Direct, I=indirect, IA=indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	A4
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	FS-3	ND												
	ES-3	ND					Prep A	70%	intact	5-10% debris				
	CS-3	ND					Prep B	N/A						
	CS-4	ND					Prep C	10/25/11						
B	FS-4	ND												
	ES-4	ND												
	CS-4	ND												

Rev 3-2009

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N <u>S</u>
Voltage (KV)	100 KV
Magnification	<u>20KX</u> 10KX
Grid opening area (mm ²)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm ²)	385
Secondary Filter Area (mm ²)	N/A
QA Type	not QA

Client:	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm ²)	1112
Date received by lab	10/25/11
Lab Job Number:	223070
Lab Sample Number:	814327

Analyzed by	JL
Analysis date	10/25/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	A41
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

P-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	G2-3	ND												
	F2-3	ND					Prep A 70% intact ~5% debris							
	E2-3	ND					Prep B ~60% intact ~5% debris							
	C2-3	ND					Pen/Perm 10/25/11							
B	G3-3	ND												
	F3-3	ND												
	F4-3	ND												

Rev 3-2009

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm ²)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm ²)	385
Secondary Filter Area (mm ²)	N/A
QA Type	not QA

Client:	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm ²):	1112
Date received by lab	10/25/11
Lab Job Number	223070
Lab Sample Number:	814328

Analyzed by	JK
Analysis date	10/25/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	A4
Grid storage location	Month Analyzed
Scooter Alignment	Oats Analyzed

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	H5-3	ND												
	G5-3	ND					Prep A 90% intact ~5% debris							
	F5-3	ND					Prep B ~1							
	S5-3	ND					for prep 10/25/11							
B	H4-1	ND												
	G4-1	ND												
	P4-1	ND												

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material

Rev 5-2005

Analytical Procedures – AHERA

Transmission electron microscopy/energy dispersive X-ray spectrometry/selected area electron diffraction (TEM/EDX/SAED) was employed in the analysis of the samples, which were collected on 25 mm mixed cellulose ester air filters. A portion of each filter was collapsed with acetone and etched in a plasma asher. The etched filter was then coated with a thin layer of carbon in a carbon side down. The sample was then placed inside a condensation washer and treated with acetone to remove the filter matrix and expose any inert material.

For each sample, enough grid openings on a 200 mesh TEM grid are analyzed to ensure an analytical sensitivity of at least 0.005 structures/cc. A minimum of four grid openings from two preparations are analyzed for each sample. The grid openings are searched for fibrous structures which, if present are analyzed by SAED and/or EDX (elemental analysis). The AHERA protocol requires SAED confirmation of enough chrysotile asbestos structures on each sample to cause the sample to exceed 70 structures/mm² (usually 4 or 5 structures). Both SAED and EDX confirmation are required of enough amphibole structures on each sample to cause the sample to exceed 70 structures/mm² (usually 4 or 5 structures) per sample. Either SAED or EDX is required for the remaining asbestos structures of either type. The morphology of each structure is determined and the length and the diameter of any asbestos structures are recorded. Asbestos fibers, bundles, cluster and matrices were identified and recorded. The asbestos structures have been defined in AHERA as follows:

- Fiber:** is a structure having a minimum length greater than or equal to 0.5 micron with an aspect ratio of 5:1 or greater with substantially parallel sides.
- Bundle:** is a structure composed of three or more fibers in parallel arrangement, with each fiber closer than the diameter of one fiber.
- Cluster:** is a structure with fibers in random arrangements such that all fibers are intermixed and no single fiber is isolated from the group.
- Matrix:** is a fiber or fibers with one end free and the other end embedded or hidden by a particulate. The exposed fiber end must meet the fiber definition given above.

If more than 50 asbestos structures are identified and confirmed on a sample, AHERA analysis may be terminated after completion of the grid opening, which contains the 50th structure. AHERA protocol requires the laboratory to reject any clearance sample which contains in excess of 25% total particulate loading or which appears to be unevenly loaded.

The AHERA protocol includes specific sampling requirements, including minimum numbers of samples and minimum air volumes. Specifically, the 70 structures/mm² clearance criteria is only allowed for sets five inside samples (collected in a group of 13 samples including: five outsides and three blanks) with volumes greater than 1200 liters (40 CFR Part 763, page 41894). Deviation from the AHERA sampling protocol may affect the validity of the analytical results. Analysis of samples collected by non-protocol methods are not accredited by NVLAP

Equations Used for Calculations

$$\text{Area Analyzed, mm}^2 = \# \text{ GO counted} \times \text{Average GO Area (mm)}$$

$$\text{Concentration, s/cc} = \frac{\# \text{ Asbestos Structures}}{\# \text{ GO Counted}} \times \frac{1}{\text{Volume (L)}} \times \frac{\text{Eff. Filter Area (mm}^2\text{)}}{\text{Average GO area (mm}^2\text{)}} \times \frac{\text{IL}}{1000\text{cc}}$$

$$\text{Filter loading, s/mm}^2 = \frac{\# \text{ Asbestos structures}}{\text{Area Analyzed (mm}^2\text{)}}$$

GO = TEM grid opening



October 27, 2011

Laboratory Code: RES
Subcontract Number: NA
Laboratory Report: RES 223142-1
Project # / P.O. #: None Given
Project Description: Pacificorp- 3rd West
Substation Rebuild

David Roskelley
R & R Environmental
47 West 9000 South #2
Sandy UT 84070

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 223142-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeanne Orr", is written over a horizontal line.

Jeanne Spencer Orr
President

RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0; TDH: #30-0015

TABLE I. TEM AIR FILTER SAMPLE DATA AND ANALYTICAL RESULTS

RES Job Number: RES 223142-1
Client: R & R Environmental
Client Project Number / P.O.: None Given
Client Project Description: Pacificorp- 3rd West Substation Rebuild
Date Samples Received: October 26, 2011
Analysis Type: TEM, AHERA
Turnaround: 24 Hour
Date Samples Analyzed: October 27, 2011

Client ID Number	Lab ID Number	Area Analyzed	Air Volume Sampled	Number of Asbestos Structures Detected	Analytical Sensitivity	Asbestos Concentration	Filter Loading
		(mm ²)	(L)		(s/cc)	(s/cc)	(s/mm ²)
3W-10-25-11-N	EM 814778	0.0770	1162	ND	0.0043	BAS	BAS
3W-10-25-11-S	EM 814779	0.0770	1160	ND	0.0043	BAS	BAS
3W-10-25-11-E	EM 814780	0.0770	1164	1	0.0043	0.0043	13.0
3W-10-25-11-W	EM 814781	0.0770	1162	ND	0.0043	BAS	BAS
Blank	EM 814782	NA	0	NA	---	---	---
Blank	EM 814783	NA	0	NA	---	---	---

NA = Not Analyzed
 ND = None Detected
 BAS = Below Analytical Sensitivity
 Average Grid Opening in mm² = 0.011

Filter Material = Mixed Cellulose Ester
 Filter Diameter = 25 mm
 Effective Filter Area = 385 sq mm

Digitally
 signed by
 J. R. Williams
 Date:
 2011.10.27
 08:08:50 -
 00'00"

DATA QA

RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0; TDH: #30-0015

TABLE II. SUMMARY OF ANALYTICAL DATA

RES Job Number: RES 223142-1
 Client: R & R Environmental
 Client Project Number / P.O.: None Given
 Client Project Description: Pacificorp- 3rd West Substation Rebuild
 Date Samples Received: October 26, 2011
 Analysis Type: TEM, AHERA
 Turnaround: 24 Hour
 Date Samples Analyzed: October 27, 2011

Client ID Number	Lab ID Number	Asbestos Mineral	Asbestos Structure Types*				Structures >5 Microns in Length	**Excluded Structures	Asbestos Structures for Concentration
			Fibers	Bundles	Clusters	Matrices			
3W-10-25-11-N	EM 814778	ND	0	0	0	0	0	0	0
3W-10-25-11-S	EM 814779	ND	0	0	0	0	0	0	0
3W-10-25-11-E	EM 814780	Chrysotile	1	0	0	0	0	0	1
3W-10-25-11-W	EM 814781	ND	0	0	0	0	0	0	0
Blank	EM 814782	NA							
Blank	EM 814783	NA							

*See Analytical Procedure for definitions

**C = Excluded from total due to lack of confirmation

**L = Excluded from total for length less than 0.5 micron (AHERA only)

**A = Excluded from total due to incorrect aspect ratio

ND = None Detected

Due Date: 10-27
Due Time: 845

REILAB Reservoirs Environmental, Inc.

5801 Logan St. Denver, CO 80218 • Ph: 303 594-1955 • Fax 303-477-4275 • Toll Free: 888 REI-ENV

Pager: 303-519-2186

RES 223142

INVOICE TO: (IF DIFFERENT)

CONTACT INFORMATION:

Company: <u>REI Environmental, Inc.</u>	Company:	Contact: <u>David Rodriguez</u>	Contact:
Address: <u>47 W. 9200 S. #13</u>	Address:	Phone: <u>821.541.1035</u>	Phone:
<u>Sandy, Utah 84070</u>		Fax:	Fax:
		Cell/pager	Cell/pager
Project Number and/or P.O. #:	Final Date Deliverable Email Address: <u>DAVE@REENVIRDO.COM</u>		
Project Description/Location: <u>Paul Green - 3rd West Substation Refill</u>			

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm		REQUESTED ANALYSIS												VALID MATRIX CODES		LAB NOTES:					
PLM / PCM / TEM	<input type="checkbox"/> RUSH (Same Day) <input checked="" type="checkbox"/> PRIORITY (Next Day) <input type="checkbox"/> STANDARD	PLM - Short report, Long report, Point Count	TEM - AHERA, Level II, 7402, ISO, +/-, Quant, Semi-quant, Micro-vac, ISO Indirect Preps	PCM - 7400A, 7400B, OSHA	DUST - Total, Respirable	METALS - Analyte(s)	RCRA 8, TCLP, Welding Fume, Metals Scan	ORGANICS - METH	Salmonella: +/-	E. coli O157:H7: +/-	Listeria: +/-	Aerobic Plate Count: +/- or Quantification	E. coli: +/- or Quantification	Coliforms: +/- or Quantification	S. aureus: +/- or Quantification	Y & M: +/- or Quantification	Mold: +/-, Identification, Quantification	SAMPLES INITIALS OR OTHER NOTES	Alr = A	Bulk = B	EM Number (Laboratory Use Only)
(Ruah PCM = 2hr, TEM = 6hr.)																			Dust = D	Paint = P	
CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm																			Soil = S	Wipe = W	
Metal(s) / Dust	<input type="checkbox"/> RUSH <input type="checkbox"/> 24 hr. <input type="checkbox"/> 3-5 Day																		Swab = SW	F = Food	
RCRA 8 / Metals & WeMing	<input type="checkbox"/> RUSH <input type="checkbox"/> 5 day <input type="checkbox"/> 10 day																		Drinking Water = DW	Waste Water = WW	
Fume Scan / TCLP	<input type="checkbox"/> RUSH <input type="checkbox"/> 5 day <input type="checkbox"/> 10 day	O = Other																			
Organics	<input type="checkbox"/> 24 hr. <input type="checkbox"/> 3 day <input type="checkbox"/> 5 Day	**ASTM E1782 approved wipe media only**																			
MICROBIOLOGY LABORATORY HOURS: Weekdays: 8am - 5pm		Sample Volume (L) / Area	Matrix Code	# Containers	Date Collected mm/dd/yy	Time Collected m/mm a/p															
E. coli O157:H7, Coliforms, S. aureus	<input type="checkbox"/> 24 hr. <input type="checkbox"/> 2 Day <input type="checkbox"/> 3-5 Day																				
Salmonella, Listeria, E. coli, APC, Y & M	<input type="checkbox"/> 43 Hr. <input type="checkbox"/> 3-5 Day																				
Mold	<input type="checkbox"/> RUSH <input type="checkbox"/> 24 Hr <input type="checkbox"/> 48 Hr <input type="checkbox"/> 3 Day <input type="checkbox"/> 5 Day																				
Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.																					
Special Instructions:																					
Client sample ID number (Sample ID's must be unique)																					
1	3W-10-25-11-H																	1162A	10/25/11	814778	
2	-S																	1162D		79	
3	-E																	1164		80	
4	-W																	1162A		81	
5	Blank																			82	
6	Blank																			83	
7																					
8																					
9																					
10																					

Number of samples received: (Additional samples shall be listed on attached long form.)

NOTE: REI will analyze incoming samples based upon information provided and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing client/company representative agree that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute a regulatory service agreement with payment terms of NET 30 days, failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By: <u>[Signature]</u>	Date/Time: <u>10/25/11 1300</u>	Sample Condition: On Ice Sealed Intact
Laboratory Use Only		Temp. (F) <u>845</u> Yee / No Yee / No <u>Yes</u> / No
Received By: <u>[Signature]</u>	Date/Time: <u>10-26-11</u>	Carrier: <u>5064</u>
Results:	Contact Phone Email Fax Date Time Initials	Contact Phone Email Fax Date Time Initials
	Contact Phone Email Fax Date Time Initials	Contact Phone Email Fax Date Time Initials

Attachment I

Key to Count Sheets
Count Sheets
Analytical Procedures

Structures identifications consist of an Asbestos Type followed by a Structure Type

Asbestos Type

A = Amosite
An = Anthophyllite
C = Chrysotile
Cr = Crocidolite
T = Tremolite

Structure Types

F = Fiber
B = Bundle
C = Cluster
M = Matrix

ND = no structures detected
M = other structure associated with a matrix
NAM = Non Asbestos Mineral
XGB = partly obscured by a grid bar

Sizing Conversion

1 length unit = 5 mm on screen = 0.278 micron

1.80 length units = 0.5 micron

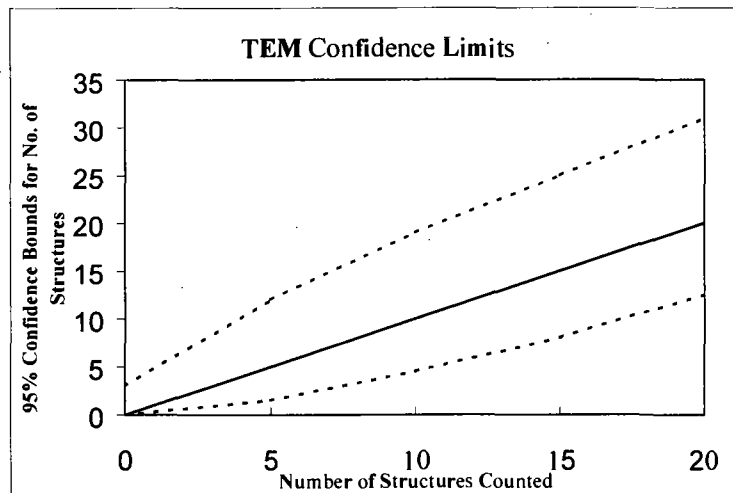
18.0 length units = 5 microns

1 width unit = 1 mm on screen = 0.0556 micron

TEM Analysts

Jeanne S. Orr
Nathan DelHierro
Angela Heitger
Jonathan Bernard

Paul D. LoScalzo
Mark Steiner
Norberto Zimbleman
Robert Workman



Upper and lower 95% confidence bounds for the number of structures counted assuming a Poisson distribution.

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100(N) S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm ²)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm ²)	385
Secondary Filter Area (mm ²)	
QA Type	

Client:	R&R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm ²)	1162
Date received by lab	10/25/11
Lab Job Number	223142
Lab Sample Number	814778

Analyzed by	JB
Analysis date	10/26/11
Method (D=Direct, i=Indirect, IA=Indirect, astied)	D
Counting rules (ISO, ANERA, ASTM)	Alt
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EOS
A	H4-3	ND												
	G4-3	ND					Pump A	80% am amt			5% debris			
	F5-3	ND					Pump B ~ A							
	E5-3	ND												
B	H5-1	ND												
	G5-1	ND												
	F5-1	ND												

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material

Reservoir Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100(N) S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm ²)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm ²)	385
Secondary Filter Area (mm ²)	
QA Type	

Client :	R&R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm ²)	1160
Date received by lab	10/25/11
Lab Job Number	223142
Lab Sample Number:	814779

Analyzed by	JB
Analysis date	10/26/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AT
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	65-6	ND												
	F5-6	ND												
	E5-6	ND					Pump A	80% ambient			5% debris			
	15-6	ND					Pump B	80% ambient			5% debris			
B	E5-6	ND												
	15-6	ND												
	B5-6	ND												

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100(N) S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm ²)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm ²)	385
Secondary Filter Area (mm ²)	
QA Type	

Client :	Rek
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm ²)	1164
Date received by lab	10/25/11
Lab Job Number:	223142
Lab Sample Number:	814780

Analyzed by	JB
Analysis date	10/26/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AT
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	H4-4	NO												
	H4-4	NO					Pmp A	80% unident			5-7% debris			
	G4-4	NO					Pmp B	60% unident			5-7% debris			
	F4-4	F		1	4.5	1	CD		✓					
B	H4-3	NO												
	G4-3	NO												
	F4-3	NO												

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100(N) S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm ²)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm ²)	385
Secondary Filter Area (mm ²)	
QA Type	

Client:	ReR
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm ²)	1162
Date received by lab	10/25/11
Lab Job Number:	223142
Lab Sample Number:	814781

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JB
Analysis date	10/26/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	E4-3	MS												
	C4-3	MS					Prep A	80% on tank			5-7% debris			
	B4-3	MS					Prep B	50% on tank			5-7% debris			
	C4-1	MS												
B	L3-3	MS												
	K3-6	MS												
	K3-3	MS												

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material

Analytical Procedures – AHERA

Transmission electron microscopy/energy dispersive X-ray spectrometry/selected area electron diffraction (TEM/EDX/SAED) was employed in the analysis of the samples, which were collected on 25 mm mixed cellulose ester air filters. A portion of each filter was collapsed with acetone and etched in a plasma asher. The etched filter was then coated with a thin layer of carbon in a carbon side down. The sample was then placed inside a condensation washer and treated with acetone to remove the filter matrix and expose any inert material.

For each sample, enough grid openings on a 200 mesh TEM grid are analyzed to ensure an analytical sensitivity of at least 0.005 structures/cc. A minimum of four grid openings from two preparations are analyzed for each sample. The grid openings are searched for fibrous structures which, if present are analyzed by SAED and/or EDX (elemental analysis). The AHERA protocol requires SAED confirmation of enough chrysotile asbestos structures on each sample to cause the sample to exceed 70 structures/mm² (usually 4 or 5 structures). Both SAED and EDX confirmation are required of enough amphibole structures on each sample to cause the sample to exceed 70 structures/mm² (usually 4 or 5 structures) per sample. Either SAED or EDX is required for the remaining asbestos structures of either type. The morphology of each structure is determined and the length and the diameter of any asbestos structures are recorded. Asbestos fibers, bundles, cluster and matrices were identified and recorded. The asbestos structures have been defined in AHERA as follows:

Fiber:	is a structure having a minimum length greater than or equal to 0.5 micron with an aspect ratio of 5:1 or greater with substantially parallel sides.
Bundle:	is a structure composed of three or more fibers in parallel arrangement, with each fiber closer than the diameter of one fiber.
Cluster:	is a structure with fibers in random arrangements such that all fibers are intermixed and no single fiber is isolated from the group.
Matrix:	is a fiber or fibers with one end free and the other end embedded or hidden by a particulate. The exposed fiber end must meet the fiber definition given above.

If more than 50 asbestos structures are identified and confirmed on a sample, AHERA analysis may be terminated after completion of the grid opening, which contains the 50th structure. AHERA protocol requires the laboratory to reject any clearance sample which contains in excess of 25% total particulate loading or which appears to be unevenly loaded.

The AHERA protocol includes specific sampling requirements, including minimum numbers of samples and minimum air volumes. Specifically, the 70 structures/mm² clearance criteria is only allowed for sets five inside samples (collected in a group of 13 samples including: five outsides and three blanks) with volumes greater than 1200 liters (40 CFR Part 763, page 41894). Deviation from the AHERA sampling protocol may affect the validity of the analytical results. Analysis of samples collected by non-protocol methods are not accredited by NVLAP

Equations Used for Calculations

$$\text{Area Analyzed, mm}^2 = \# \text{ GO counted} \times \text{Average GO Area (mm)}$$

$$\text{Concentration, s/cc} = \frac{\# \text{ Asbestos Structures}}{\# \text{ GO Counted}} \times \frac{1}{\text{Volume (L)}} \times \frac{\text{Eff. Filter Area (mm}^2\text{)}}{\text{Average GO area (mm}^2\text{)}} \times \frac{1\text{L}}{1000\text{cc}}$$

$$\text{Filter loading, s/mm}^2 = \frac{\# \text{ Asbestos structures}}{\text{Area Analyzed (mm}^2\text{)}}$$

GO = TEM grid opening

Due Date: 10/29/11
Due Time: 8:45a

REI LAB **Reservoirs Environmental, Inc.**
501 Logan St. Denver, CO 80216 • Ph: 303 984-1986 • Fax 303-477-4275 • Toll Free: 888-RES-ENV
Pager: 303-608-2098

RES 223268

Page 1 of 1

INVOICE TO: (IF DIFFERENT)

CONTACT INFORMATION:

Company: <u>REI Environmental</u>	Company:	Contact: <u>Dave Roskelley</u>	Contact:
Address: <u>47 W. 9000 S.</u>	Address:	Phone:	Phone:
<u>Sandy, UT. 84070</u>		Fax:	Fax:
		Cell/pager: <u>801 541-1035</u>	Cell/pager:
Project Number and/or P.O. #:		Final Date Deliverable Email Address:	
Project Description/Location: <u>31st West Sub Station - RMP</u>		<u>dave@reiviro.com</u>	

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm		REQUESTED ANALYSIS												VALID MATRIX CODES		LAB NOTES:					
PLM / PCM / TEM	<u> </u> RUSH (Same Day) <u>X</u> PRIORITY (Next Day) <u> </u> STANDARD (Rush PCM = 2hr, TEM = 6hr.)	PLM - Short report, Long report, Point Count	TEM - AHERA, Level II, 7402, ISO, +/-, Quant, Semi-quant, Micro-vac, ISO-Indirect Preps	PCM - 7400A, 7400B, OSHA	DUST - Total, Respirable	METALS - Analyses(a)	RCRA 8, TCLP, Welding Fume, Metals Scan	ORGANICS - METH	Salmonella: +/-	E.coli O157:H7: +/-	Listeria: +/-	Aerobic Plate Count: +/- or Quantification	E.coli: +/- or Quantification	Coliforms: +/- or Quantification	S.aureus: +/- or Quantification	Y & M: +/- or Quantification	Mold: +/- Identification, Quantification	Air = A	Bulk = B		
CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm																		Dust = D	Paint = P		
Metal(s) / Dust	<u> </u> RUSH <u> </u> 24 hr. <u> </u> 3-5 Day																	Soil = S	Wipe = W		
RCRA 8 / Metals & Welding Fume Scan / TCLP	<u> </u> RUSH <u> </u> 6 day <u> </u> 10 day																	Swab = SW	F = Food		
Organics	<u> </u> 24 hr. <u> </u> 3 day <u> </u> 5 Day																	Drinking Water = DW	Waste Water = WW		
MICROBIOLOGY LABORATORY HOURS: Weekdays: 9am - 5pm																		O = Other			
E.coli O157:H7, Coliforms, S.aureus	<u> </u> 24 hr. <u> </u> 2 Day <u> </u> 3-5 Day																	**ASTM E 1792 approved wipe media only**			
Salmonella, Listeria, E.coli, APC, Y & M	<u> </u> 48 Hr. <u> </u> 3-5 Day																				
Mold	<u> </u> RUSH <u> </u> 24 Hr <u> </u> 48 Hr <u> </u> 3 Day <u> </u> 5 Day																				
Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.																					
Special Instructions:																					
Client sample ID number (Sample ID's must be unique)																			EM Number (Laboratory Use Only)		
1	3W-102711-E		X															917	A	10/27/11	8:45a
2	3W-102711-S																	916			C2
3	3W-102711-N																	913			C3
4	3W-102711-W																	916			C4
5																					
6																					
7																					
8																					
9																					
10																					

Number of samples received: (4) (Additional samples shall be listed on attached long form.)

NOTE: REI will analyze incoming samples based upon information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days, failure to comply with payment terms may result in a 1.8% monthly interest surcharge.

Relinquished By: <u>[Signature]</u> <u>FedEx</u>	Date/Time: <u>10/27/11</u>	Sample Condition:	On Ice	Sealed	Intact
Laboratory Use Only		Temp. (F°)	Yes / No	Yes / No	Yes / No
Received By: <u>[Signature]</u>	Date/Time: <u>10/29/11</u> <u>8:45a</u> Carrier <u>FedEx</u>				
Results:	Contact: <u>Dave</u> Phone: <u> </u> Email: <u> </u> Fax: <u> </u> Date: <u>10/29</u> Time: <u>12:30a</u> Initials: <u>DR</u>	Contact:	Phone	Email	Fax
	Contact: <u> </u> Phone: <u> </u> Email: <u> </u> Fax: <u> </u> Date: <u> </u> Time: <u> </u> Initials: <u> </u>	Contact:	Phone	Email	Fax

10/29/11

Transf. 7083 4500 3045

Attachment I

Key to Count Sheets Count Sheets Analytical Procedures

Structures identifications consist of an Asbestos Type followed by a Structure Type

Asbestos Type

A = Amosite
An = Anthophyllite
C = Chrysotile
Cr = Crocidolite
T = Tremolite

Structure Types

F = Fiber
B = Bundle
C = Cluster
M = Matrix

ND = no structures detected
M = other structure associated with a matrix
NAM = Non Asbestos Mineral
XGB = partly obscured by a grid bar

Sizing Conversion

1 length unit = 5 mm on screen = 0.278 micron

1.80 length units = 0.5 micron

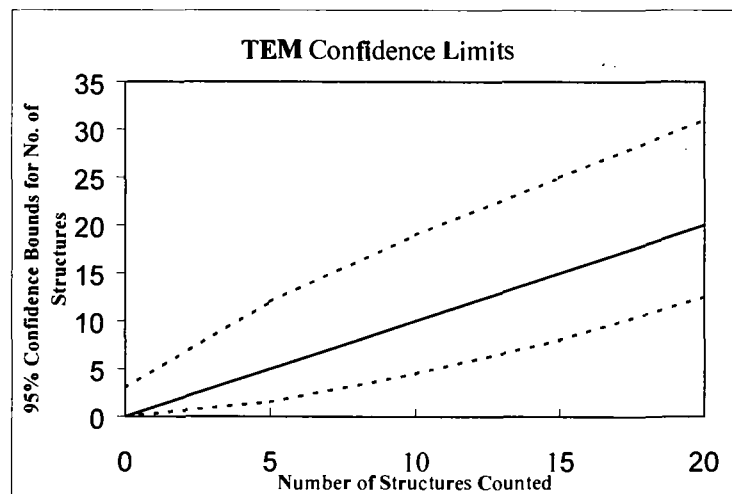
18.0 length units = 5 microns

1 width unit = 1 mm on screen = 0.0556 micron

TEM Analysts

Jeanne S. Orr
Nathan DelHierro
Angela Heitger
Jonathan Bemard

Paul D. LoScalzo
Mark Steiner
Norberto Zimbleman
Robert Workman



Upper and lower 95% confidence bounds for the number of structures counted assuming a Poisson distribution.

Reservoirs Environmental, Inc.

Laboratory name:	REI
Instrument	JEOL 100 N S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm ²)	0.011
Scale: 1L =	0.28 μ m
Scale: 10 =	0.056 μ m
Primary filter area (mm ²)	385
Secondary Filter Area (mm ²)	
QA Tvoe	

Client :	R + R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	917
Date received by lab	10/28/11
Lab Job Number	223268
Lab Sample Number:	816061

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JK
Analysis date	10/28/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting mls (ISO, AHERA, ASTM)	44
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

[illegible]

Rsv 3-2009

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm ²)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm ²)	385
Secondary Filter Area (mm ²)	
QA Type	

Client:	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm ²)	916
Date received by lab	10/25/11
Lab Job Number:	223268
Lab Sample Number:	816062

Analyzed by	AK
Analysis date	10/28/11
Method (D=Direct, I=indirect, IA=indirect ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	C5-4	ND												
	B5-4	ND					Prep A	60% intact	1-3/	debris				
	F3-3	ND					Prep B	80% intact	1-3/	debris				
	E3-3	ND					Prep from 10/28/11							
B	G4-3	ND												
	F4-3	ND												
	E4-3	ND												
	C4-3	ND												

Rev 3-2009

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm ²)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm ²)	385
Secondary Filter Area (mm ²)	
QA Type	

Client:	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm ²)	913
Date received by lab	10/28/11
Lab Job Number:	223268
Lab Sample Number:	816063

Analyzed by	JK
Analysis date	10/28/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	F2-4	ND												
	E2-4	ND					Prep A 70% intact			1-3% debris				
	C2-4	ND					Prep B ~ A							
	B2-4	ND					Prep C ~ A			10/28/11				
B	G2-3	ND												
	F2-3	ND												
	E2-3	ND												
	C2-3	ND												

Rev 3-2009

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm ²)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm ²)	385
Secondary Filter Area (mm ²)	N/A
QA Type	NO QA

Client:	R+R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm ²)	916
Date received by lab	10/28/11
Lab Job Number:	223268
Lab Sample Number:	816064

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	PK
Analysis date	10/28/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	L4-1	ND												
	K4-1	ND					Proc A ~90% intact			1-3% debris				
	H4-1	ND					Proc B ~A							
	Q4-1	ND					from from 10/28/11							
B	G3-3	ND												
	F3-3	ND												
	E3-3	ND												
	C3-3	ND												

Rev 3-2009

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material

Analytical Procedures – AHERA

Transmission electron microscopy/energy dispersive X-ray spectrometry/selected area electron diffraction (TEM/EDX/SAED) was employed in the analysis of the samples, which were collected on 25 mm mixed cellulose ester air filters. A portion of each filter was collapsed with acetone and etched in a plasma asher. The etched filter was then coated with a thin layer of carbon in a carbon side down. The sample was then placed inside a condensation washer and treated with acetone to remove the filter matrix and expose any inert material.

For each sample, enough grid openings on a 200 mesh TEM grid are analyzed to ensure an analytical sensitivity of at least 0.005 structures/cc. A minimum of four grid openings from two preparations are analyzed for each sample. The grid openings are searched for fibrous structures which, if present are analyzed by SAED and/or EDX (elemental analysis). The AHERA protocol requires SAED confirmation of enough chrysotile asbestos structures on each sample to cause the sample to exceed 70 structures/mm² (usually 4 or 5 structures). Both SAED and EDX confirmation are required of enough amphibole structures on each sample to cause the sample to exceed 70 structures/mm² (usually 4 or 5 structures) per sample. Either SAED or EDX is required for the remaining asbestos structures of either type. The morphology of each structure is determined and the length and the diameter of any asbestos structures are recorded. Asbestos fibers, bundles, cluster and matrices were identified and recorded. The asbestos structures have been defined in AHERA as follows:

- Fiber:** is a structure having a minimum length greater than or equal to 0.5 micron with an aspect ratio of 5:1 or greater with substantially parallel sides.
- Bundle:** is a structure composed of three or more fibers in parallel arrangement, with each fiber closer than the diameter of one fiber.
- Cluster:** is a structure with fibers in random arrangements such that all fibers are intermixed and no single fiber is isolated from the group.
- Matrix:** is a fiber or fibers with one end free and the other end embedded or hidden by a particulate. The exposed fiber end must meet the fiber definition given above.

If more than 50 asbestos structures are identified and confirmed on a sample, AHERA analysis may be terminated after completion of the grid opening, which contains the 50th structure. AHERA protocol requires the laboratory to reject any clearance sample which contains in excess of 25% total particulate loading or which appears to be unevenly loaded.

The AHERA protocol includes specific sampling requirements, including minimum numbers of samples and minimum air volumes. Specifically, the 70 structures/mm² clearance criteria is only allowed for sets five inside samples (collected in a group of 13 samples including: five outsides and three blanks) with volumes greater than 1200 liters (40 CFR Part 763, page 41894). Deviation from the AHERA sampling protocol may affect the validity of the analytical results. Analysis of samples collected by non-protocol methods are not accredited by NVLAP

Equations Used for Calculations

$$\text{Area Analyzed, mm}^2 = \# \text{ GO counted} \times \text{Average GO Area (mm)}$$

$$\text{Concentration, s/cc} = \frac{\# \text{ Asbestos Structures}}{\# \text{ GO Counted}} \times \frac{1}{\text{Volume (L)}} \times \frac{\text{Eff. Filter Area (mm}^2\text{)}}{\text{Average GO area (mm}^2\text{)}} \times \frac{1\text{L}}{1000\text{cc}}$$

$$\text{Filter loading, s/mm}^2 = \frac{\# \text{ Asbestos structures}}{\text{Area Analyzed (mm}^2\text{)}}$$

GO = TEM grid opening

Fireside Chat

The goal of this pilot project is to capture a small amount of the immense knowledge that you have collected throughout your career. Here is a general list of questions to help guide the interview and to allow you time to think of stories or responses that you want to share. Feel free to add questions or to ask people that you work with to add questions.

General Questions to Think About

1. Over the years, what have been the biggest hurdles to succeeding or completing tasks?
2. What changes have you seen made that were beneficial to the organization? Why?
3. What changes have been counterproductive to the organization? Why?
4. What areas do you think could use changes?
 - a. What would you change?
 - b. Any suggestions?
5. What avenues do you explore when you need a question answered?
6. Are there specific people or roles that seem to have answers to these questions more frequently than others?
7. What have been some of your greatest successes or accomplishments in your career?
 - a. How did you accomplish these?
8. What mistakes have you made in your career?
 - a. What happen?
 - b. How did you avoid these mistakes afterward?
9. Over the years you have seen many changes in EPA practices. What do you think are presently the largest hurdles? (Specifically within your role)
 - a. What about moving forward?
10. What training/trainings were the most beneficial?
 - a. How did these trainings help you in this position?
11. What trainings do you recommend your incumbent take?
12. What committees/groups/meetings or groups do you recommend your incumbent join or participate in?
13. Are there any people that have helped you with your job that the incumbent should meet with? Mentors?
14. What skills or attributes do you possess that made you good in this role?
15. What knowledge would you like to pass on to someone to help them survive/excel in this role?

Program Specific Questions

- 1.



October 31, 2011

Laboratory Code: RES
Subcontract Number: NA
Laboratory Report: RES 223269-1
Project # / P.O. #: None Given
Project Description: 3rd West Sub Station - RMP

Eldon Romney
R & R Environmental
47 West 9000 South #2
Sandy UT 84070

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 223269-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeanne Orr", is written over a horizontal line.

Jeanne Spencer Orr
President

RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0; TDH: #30-0015

TABLE I. TEM AIR FILTER SAMPLE DATA AND ANALYTICAL RESULTS

RES Job Number: RES 223269-1
Client: R & R Environmental
Client Project Number / P.O.: None Given
Client Project Description: 3rd West Sub Station - RMP
Date Samples Received: October 28, 2011
Analysis Type: TEM, AHERA
Turnaround: 24 Hour
Date Samples Analyzed: October 29, 2011

Client ID Number	Lab ID Number	Area Analyzed	Air Volume Sampled	Number of Asbestos Structures Detected	Analytical Sensitivity	Asbestos Concentration	Filter Loading
		(mm ²)	(L)		(s/cc)	(s/cc)	(s/mm ²)
3W-102611-E	EM 816065	0.0880	1066	ND	0.0041	BAS	BAS
3W-102611-S	EM 816066	0.0770	1066	ND	0.0047	BAS	BAS
3W-102611-N	EM 816067	0.0770	1064	ND	0.0047	BAS	BAS
3W-102611-W	EM 816068	0.0770	1064	ND	0.0047	BAS	BAS

NA = Not Analyzed

ND = None Detected

BAS = Below Analytical Sensitivity

Average Grid Opening in mm² = 0.011

Filter Material = Mixed Cellulose Ester

Filter Diameter = 25 mm

Effective Filter Area = 385 sq mm

gv
Digitally signed
 by Gina Vistrano
 Date: 2011.10.31
 10:05:05 -0800

DATA QA

Due Date: 10-29-11
Due Time: 845

RES LAB **Reservoirs Environmental, Inc.**
5801 Logan St. Denver, CO 80216 • Ph: 303 864-1986 • Fax 303-477-4275 • Toll Free 866 RES-ENV
Pager : 303-509-2108

INVOICE TO: (IF DIFFERENT)

CONTACT INFORMATION:

Company: <u>RER Environmental</u>	Company:	Contact: <u>Dave Roskeller</u>	Contact:
Address: <u>47 W. 9000 S.</u>	Address:	Phone:	Phone:
<u>Sandy, UT. 84070</u>		Fax:	Fax:
		Cell/pager: <u>801 541-1235</u>	Cell/pager:
Project Number and/or P.O. #:	Final Data Deliverable Email Address: <u>dave@resenviro.com</u>		
Project Description/Location: <u>30 West Sub Station - RMP</u>			

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm		REQUESTED ANALYSIS										VALID MATRIX CODES		LAB NOTES:								
PLM / PCM / TEM <u>STANDARD</u> (Rush PCM = 2hr, TEM = 5hr.)		PLM - Short report, Long report, Point Count	TEM - AHERA, Level II, 7402, ISO, +/-, Quant, Semi-quant, Micro-vac, ISO-Indirect Preps	PCM - 7400A, 7400B, OSHA	DUST - Total, Respirable	METALS - Analyte(s)	RCRA 8, TCLP, Welding Fume, Metals Scan	ORGANICS - METH	Salmonella: +/-	E.coli O157:H7: +/-	Listeria: +/-	Aerobic Plate Count: +/- or Quantification	E.coli: +/- or Quantification	Coliforms: +/- or Quantification	S.aureus: +/- or Quantification	Y & M: +/- or Quantification	Mold: +/- Identification, Quantification	SAMPLER'S INITIALS OR OTHER NOTES	Alr = A	Bulk = B		
CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm																			Dust = D	Paint = P		
Metal(s) / Dust <u>STANDARD</u> (Rush PCM = 2hr, TEM = 5hr.)																			Soil = S	Wipe = W		
RCRA 8 Metals & Welding <u>STANDARD</u>																			Swab = SW	F = Food		
Fume Scan / TCLP <u>STANDARD</u>																			Drinking Water = DW	Waste Water = WW		
Organics <u>STANDARD</u>		O = Other																				
MICROBIOLOGY LABORATORY HOURS: Weekdays: 9am - 6pm																						EM Number (Laboratory Use Only)
E.coli O157:H7, Coliforms, S.aureus <u>STANDARD</u>																						
Salmonella, Listeria, E.coli, APC, Y & M <u>STANDARD</u>																						
Mold <u>STANDARD</u>																						
Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.																						
Special Instructions:																						
Client sample ID number (Sample ID's must be unique)																						
1	3W-102611-E																				916065	
2	3W-102611-S																				66	
3	3W-102611-N																				67	
4	3W-102611-W																				68	
5																						
6																						
7																						
8																						
9																						
10																						

Number of samples received: 4 (Additional samples shall be listed on attached long form.)
NOTE: REI will analyze incoming samples based upon information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days. Failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By: <u>Justin K...</u>	Date/Time: <u>10/26/11</u>	Sample Condition:	On Ice	Sealed	Intact
Laboratory Use Only		Temp. (F°)	Yes / No	Yes / No	Yes / No
Received By: <u>[Signature]</u>	Date/Time: <u>10/29/11 2:30a</u>	Carrier: <u>FedEx</u>			
Results:	Contact: <u>Dave</u>	Phone Email Fax	Date	Time	Initials
	Contact: <u>[Signature]</u>	Phone Email Fax	Date	Time	Initials

Left msg
Thanking: 7576 719 6602

Attachment I

Key to Count Sheets Count Sheets Analytical Procedures

Structures identifications consist of an Asbestos Type followed by a Structure Type

Asbestos Type

A = Amosite
An = Anthophyllite
C = Chrysotile
Cr = Crocidolite
T = Tremolite

Structure Types

F = Fiber
B = Bundle
C = Cluster
M = Matrix

ND = no structures detected
M = other structure associated with a matrix
NAM = Non Asbestos Mineral
XGB = partly obscured by a grid bar

Sizing Conversion

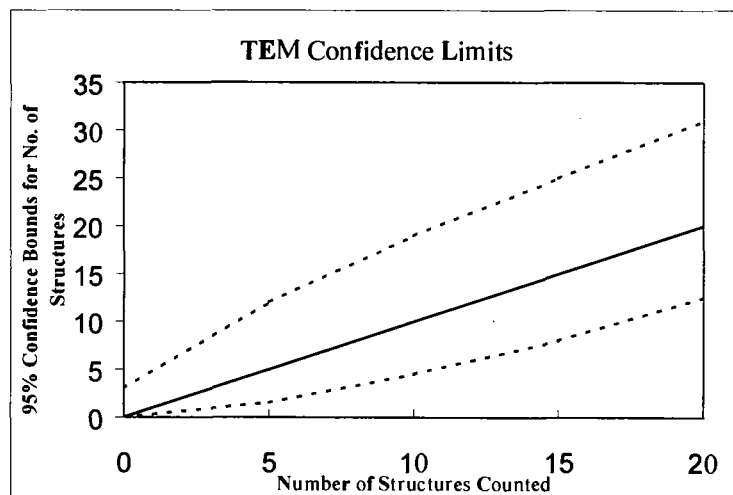
1 length unit = 5 mm on screen = 0.278 micron
1.80 length units = 0.5 micron
18.0 length units = 5 microns

1 width unit = 1 mm on screen = 0.0556 micron

TEM Analysts

Jeanne S. Orr
Nathan DelHierro
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Paul D. LoScalzo
Mark Steiner
Norberto Zimbleman
Robert Workman



Upper and lower 95% confidence bounds for the number of structures counted assuming a Poisson distribution.

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N S
Voltage (KV)	100 KV
Magnification	20KX, 10KX
Grid opening area (mm ²)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm ²)	385
Secondary Filter Area (mm ²)	N/A
QA Type	not QA

Client:	R + R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm ²)	1066
Date received by lab	10/26/11
Lab Job Number:	223269
Lab Sample Number:	816065

Analyzed by	ML
Analysis date	10/28/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting miles (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	L3-3	ND												
	K3-3	ND					Prep A ~90% intact ~5% debris							
	H3-3	ND					Prep B 70% intact ~5% debris							
	G3-3	ND					See prep 10/28/11							
B	G2-4	ND												
	F2-4	ND												
	E3-4	ND												
	C3-4	ND												

Rev 3-2009

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N <u>S</u>
Voltage (KV)	100 KV
Magnification	<u>20KX</u> 10KX
GrM opening area (mm2)	0.011
Scale: 1L =	0.28 um
Scale: 1O =	0.058 um
Primary filter area (mm2)	385
Secondary Filter Area (mm2)	N/A
QA Type	not OA

Client:	R + R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm2)	1066
Date received by lab	10/26/11
Lab Job Number:	223269
Lab Sample Number:	816066

F-Factor Calculation (Indirect Presos Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	JK
Analysis date	10/28/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
GrM storage location	Month Analyzed
Scoop Alignment	Oats Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no.		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	G4-6	ND												
	F4-6	ND					Prop A	90% intact	1-3%	debris				
	E4-6	ND					Prop B	70% intact	1-3%	debris				
	C4-6	ND					for Mon. 11/29/11							
B	G5-1	ND												
	F5-1	ND												
	E5-1	ND												

Rev 3-2009

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

O = Chrysotile

NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N S
Voltage (KV)	100 KV
Magnification	20KX, 10KX
Grid opening area (mm ²)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm ²)	385
Secondary Filter Area (mm ²)	N/A
QA Type	not QA

Client:	R + R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm ²)	1064
Date received by lab	10/26/11
Lab Job Number:	223269
Lab Sample Number:	816067

Analyzed by	ML
Analysis date	10/28/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting miles (ISO, AHERA, ASTM)	AH
Grkl storage location	Month Analyzed
Scope Alignment	Date Analyzed

F-Factor Calculation (indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no.		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	E4-3	ND												
	C4-3	ND					Prep A 20/ intact			3-5/ debris				
	K4-6	ND					Prep B ~4							
	H4-6	ND					Prep C ~4							
B	H3-4	ND												
	G3-4	ND												
	F3-4	ND												

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material

Rev 3-2009

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N S
Voltage (KV)	100 KV
Magnification	20KX, 10KX
Grid opening area (mm ²)	0.011
Scale: 1L =	0.28 μ m
Scale: 1D =	0.056 μ m
Primary filter area (mm ²)	385
Secondary Filter Area (mm ²)	N/A
QA Type	not QA

Client:	R + R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm ²)	1064
Date received by lab	10/26/11
Lab Job Number	223269
Lab Sample Number:	816068

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	ML
Analysis date	10/28/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no.		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	H6-4	ND												
	G6-4	ND												
	F6-4	ND												
	E6-4	ND												
B	K4-1	ND												
	H4-1	ND												
	G4-1	ND												

Rev 3-2009

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material

Analytical Procedures – AHERA

Transmission electron microscopy/energy dispersive X-ray spectrometry/selected area electron diffraction (TEM/EDX/SAED) was employed in the analysis of the samples, which were collected on 25 mm mixed cellulose ester air filters. A portion of each filter was collapsed with acetone and etched in a plasma asher. The etched filter was then coated with a thin layer of carbon in a carbon side down. The sample was then placed inside a condensation washer and treated with acetone to remove the filter matrix and expose any inert material.

For each sample, enough grid openings on a 200 mesh TEM grid are analyzed to ensure an analytical sensitivity of at least 0.005 structures/cc. A minimum of four grid openings from two preparations are analyzed for each sample. The grid openings are searched for fibrous structures which, if present are analyzed by SAED and/or EDX (elemental analysis). The AHERA protocol requires SAED confirmation of enough chrysotile asbestos structures on each sample to cause the sample to exceed 70 structures/mm² (usually 4 or 5 structures). Both SAED and EDX confirmation are required of enough amphibole structures on each sample to cause the sample to exceed 70 structures/mm² (usually 4 or 5 structures) per sample. Either SAED or EDX is required for the remaining asbestos structures of either type. The morphology of each structure is determined and the length and the diameter of any asbestos structures are recorded. Asbestos fibers, bundles, cluster and matrices were identified and recorded. The asbestos structures have been defined in AHERA as follows:

Fiber:	is a structure having a minimum length greater than or equal to 0.5 micron with an aspect ratio of 5:1 or greater with substantially parallel sides.
Bundle:	is a structure composed of three or more fibers in parallel arrangement, with each fiber closer than the diameter of one fiber.
Cluster:	is a structure with fibers in random arrangements such that all fibers are intermixed and no single fiber is isolated from the group.
Matrix:	is a fiber or fibers with one end free and the other end embedded or hidden by a particulate. The exposed fiber end must meet the fiber definition given above.

If more than 50 asbestos structures are identified and confirmed on a sample, AHERA analysis may be terminated after completion of the grid opening, which contains the 50th structure. AHERA protocol requires the laboratory to reject any clearance sample which contains in excess of 25% total particulate loading or which appears to be unevenly loaded.

The AHERA protocol includes specific sampling requirements, including minimum numbers of samples and minimum air volumes. Specifically, the 70 structures/mm² clearance criteria is only allowed for sets five inside samples (collected in a group of 13 samples including: five outsides and three blanks) with volumes greater than 1200 liters (40 CFR Part 763, page 41894). Deviation from the AHERA sampling protocol may affect the validity of the analytical results. Analysis of samples collected by non-protocol methods are not accredited by NVLAP

Equations Used for Calculations

$$\text{Area Analyzed, mm}^2 = \# \text{ GO counted} \times \text{Average GO Area (mm)}$$

$$\text{Concentration, s/cc} = \frac{\# \text{ Asbestos Structures}}{\# \text{ GO Counted}} \times \frac{1}{\text{Volume (L)}} \times \frac{\text{Eff. Filter Area (mm}^2\text{)}}{\text{Average GO area (mm}^2\text{)}} \times \frac{1\text{L}}{1000\text{cc}}$$

$$\text{Filter loading, s/mm}^2 = \frac{\# \text{ Asbestos structures}}{\text{Area Analyzed (mm}^2\text{)}}$$

GO = TEM grid opening



November 1, 2011

Laboratory Code: RES
Subcontract Number: NA
Laboratory Report: RES 223363-1
Project # / P.O. #: None Given
Project Description: 3rd West Sub Station - RMP

David Roskelley
R & R Environmental
47 West 9000 South #2
Sandy UT 84070

Dear Customer,

Reservoirs Environmental, Inc. is an analytical laboratory accredited for the analysis of Industrial Hygiene and Environmental matrices by the National Voluntary Laboratory Accreditation Program (NVLAP), Lab Code 101896-0 for Transmission Electron Microscopy (TEM) and Polarized Light Microscopy (PLM) analysis and the American Industrial Hygiene Association (AIHA), Lab ID 101533 - Accreditation Certificate #480 for Phase Contrast Microscopy (PCM) analysis. This laboratory is currently proficient in both Proficiency Testing and PAT programs respectively.

Reservoirs Environmental, Inc. has analyzed the following samples for asbestos content as per your request. The analysis has been completed in general accordance with the appropriate methodology as stated in the attached analysis table. The results have been submitted to your office.

RES 223363-1 is the job number assigned to this study. This report is considered highly confidential and the sole property of the customer. Reservoirs Environmental, Inc. will not discuss any part of this study with personnel other than those of the client. The results described in this report only apply to the samples analyzed. This report must not be used to claim endorsement of products or analytical results by NVLAP or any agency of the U.S. Government. This report shall not be reproduced except in full, without written approval from Reservoirs Environmental, Inc. Samples will be disposed of after sixty days unless longer storage is requested. If you have any questions about this report, please feel free to call 303-964-1986.

Sincerely,

A handwritten signature in black ink, appearing to read "Jeanne Orr", is written over a horizontal line.

Jeanne Spencer Orr
President

RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0; TDH: #30-0015

TABLE I. TEM AIR FILTER SAMPLE DATA AND ANALYTICAL RESULTS

RES Job Number: RES 223363-1
Client: R & R Environmental
Client Project Number / P.O.: None Given
Client Project Description: 3rd West Sub Station - RMP
Date Samples Received: October 31, 2011
Analysis Type: TEM, AHERA
Turnaround: 24 Hour
Date Samples Analyzed: October 31, 2011 - November 1, 2011

Client ID Number	Lab ID Number	Area Analyzed	Air Volume Sampled	Number of Asbestos Structures Detected	Analytical Sensitivity	Asbestos Concentration	Filter Loading
		(mm ²)	(L)		(s/cc)	(s/cc)	(s/mm ²)
3W-102811-E	EM 816714	0.0990	811	ND	0.0048	BAS	BAS
3W-102811-S	EM 816715	0.0990	811	1	0.0048	0.0048	10.1
3W-102811-N	EM 816716	0.0990	813	ND	0.0048	BAS	BAS
3W-102811-W	EM 816717	0.0990	813	ND	0.0048	BAS	BAS

NA = Not Analyzed

ND = None Detected


BAS = Below Analytical Sensitivity

Average Grid Opening in mm² = 0.011

Filter Material = Mixed Cellulose Ester

Filter Diameter = 25 mm

Effective Filter Area = 385 sq mm


 Digitally signed by
 Elsha Elshen
 DN: CN = Elsha
 Elshen, O = US,
 O = Reservoirs
 Environmental,
 Inc.
 Date: 2011.11.01
 11:09:05 -06:00

DATA QA

RESERVOIRS ENVIRONMENTAL, INC.

NVLAP Lab Code 101896-0; TDH: #30-0015

TABLE II. SUMMARY OF ANALYTICAL DATA

RES Job Number: RES 223363-1
 Client: R & R Environmental
 Client Project Number / P.O.: None Given
 Client Project Description: 3rd West Sub Station - RMP
 Date Samples Received: October 31, 2011
 Analysis Type: TEM, AHERA
 Turnaround: 24 Hour
 Date Samples Analyzed: October 31, 2011 - Noven

Client ID Number	Lab ID Number	Asbestos Mineral	Asbestos Structure Types*				Structures >5 Microns in Length	**Excluded Structures	Asbestos Structures for Concentration
			Fibers	Bundles	Clusters	Matrices			
3W-102811-E	EM 816714	ND	0	0	0	0	0	0	0
3W-102811-S	EM 816715	Chrysotile	0	0	0	1	0	0	1
3W-102811-N	EM 816716	ND	0	0	0	0	0	0	0
3W-102811-W	EM 816717	ND	0	0	0	0	0	0	0

*See Analytical Procedure for definitions

**C = Excluded from total due to lack of confirmation

**L = Excluded from total for length less than 0.5 micron (AHERA only)

**A = Excluded from total due to incorrect aspect ratio

ND = None Detected

Due Date: 11-1-11
Due Time: 10:00

REI LAB Reservoirs Environmental, Inc.
8801 Logan St. Denver, CO 80216 • P: 303 984-1988 • Fax 303-477-4275 • Toll Free: 888 REShENV
Pager: 303-509-2098

RES 223363

INVOICE TO: (IF DIFFERENT)

CONTACT INFORMATION:

Company: <u>RFR Environmental</u>	Company:	Contact: <u>Dave Roskelley</u>	Contact:
Address:	Address:	Phone:	Phone:
		Fax:	Fax:
		Cell/pager: <u>801 541-1035</u>	Cell/pager:
Project Number and/or P.O. #:		Final Data Deliverable Email Address:	
Project Description/Lead on: <u>3rd West Sub Station - RAMP</u>		<u>dave@newira.com</u>	

ASBESTOS LABORATORY HOURS: Weekdays: 7am - 7pm		REQUESTED ANALYSIS												VALID MATRIX CODES		LAB NOTES:				
PLM / PCM / TEM	<u>RUSH</u> (Same Day) <u>PRIORITY</u> (Next Day) <u>STANDARD</u> (Rush PCM = 2hr, TEM = 6hr.)	PLM - Short report, Long report, Point Count	TEM - AHERA, Level II, 7402, ISO, +/-, Quant, Semi-quant, Micro-loc, ISO-Indirect Peps	PCM - 7400A, 7400B, OSHA	DUST - Total, Respirable	METALS - Analyte(s)	PCRA 8, TCLP, Welding Fume, Metals Scan	ORGANICS - METH	Salmonella: +/-	E.coli O157:H7: +/-	Listeria: +/-	Aerobic Plate Count: +/- or Quantification	E.coli: +/- or Quantification	Coliforms: +/- or Quantification	S.aureus: +/- or Quantification	Y & M: +/- or Quantification	Mold: +/-, Identification, Quantification	Alr = A	Bulk = B	
CHEMISTRY LABORATORY HOURS: Weekdays: 8am - 5pm																		Dust = O	Paint = P	
Metal(s) / Dust	<u>RUSH</u> 24 hr. 3-5 Day																	Soil = S	Wipe = W	
RCRA 8 / Metals & Welding Fume Scan / TCLP	<u>RUSH</u> 5 day 10 day **Prior notification is required for RUSH turnarounds.**																	Swab = SW	F = Food	
Organics	24 hr. 3 day 5 Day																	Drinking Water = DW	Waste Water = WW	
MICROBIOLOGY LABORATORY HOURS: Weekdays: 9am - 6pm														O = Other						
E.coli O157:H7, Coliforms, S.aureus														**ASTM E1792 approved wipe media only**						
Salmonella, Listeria, E.coli, APC, Y & M														Sample Volume (L) / Area	Matrix Code	# Containers	Date Collected mm/dd/yy	Time Collected hh/mm a/p	EM Number (Labprsb Use Only)	
Mold																				
Turnaround times establish a laboratory priority, subject to laboratory volume and are not guaranteed. Additional fees apply for afterhours, weekends and holidays.																				
Special Instructions:																				
Client sample ID number (Sample ID's must be unique)																				
1	3W-102811-E																			816714
2	3W-102811-S																			15
3	3W-102811-N																			16
4	3W-102811-W																			17
5																				
6																				
7																				
8																				
9																				
10																				

Number of samples received: 4 (Additional samples shall be listed on attached long form.)

NOTE: REI will analyze incoming samples based upon information received and will not be responsible for errors or omissions in calculations resulting from the inaccuracy of original data. By signing client/company representative agrees that submission of the following samples for requested analysis as indicated on this Chain of Custody shall constitute an analytical services agreement with payment terms of NET 30 days, failure to comply with payment terms may result in a 1.5% monthly interest surcharge.

Relinquished By: <u>Justin Thomas - FedEx</u>	Date/Time: <u>10/28/11</u>	Sample Condition:	On Ice	Sealed	Intact
Laboratory Use Only		Temp. (F°)	Yes / No	Yes / No	Yes / No
Received By: <u>[Signature]</u>	Date/Time: <u>10-31-11</u>	Carrier: <u>FedEx</u>			
Results:	Contact: <u>Dave</u>	Phone Email Fax	Date	Time	Initials
	Contact: <u>[Signature]</u>	Phone Email Fax	Date	Time	Initials

7453 3045 3363

Attachment I

Key to Count Sheets
Count Sheets
Analytical Procedures

Structures identifications consist of an Asbestos Type followed by a Structure Type

Asbestos Type

A = Amosite
An = Anthophyllite
C = Chrysotile
Cr = Crocidolite
T = Tremolite

Structure Types

F = Fiber
B = Bundle
C = Cluster
M = Matrix

ND = no structures detected
M = other structure associated with a matrix
NAM = Non Asbestos Mineral
XGB = partly obscured by a grid bar

Sizing Conversion

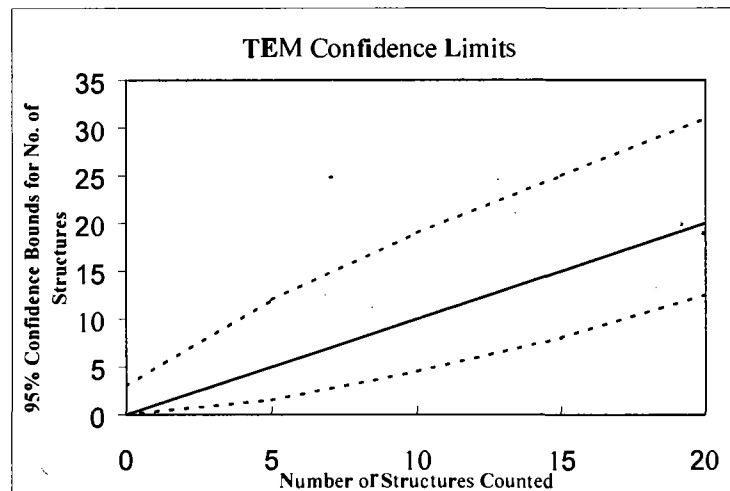
1 length unit = 5 mm on screen = 0.278 micron
1.80 length units = 0.5 micron
18.0 length units = 5 microns

1 width unit = 1 mm on screen = 0.0556 micron

TEM Analysts

Jeanne S. Orr
Nathan DelHiero
Angela Heitger
Jonathan Bernard

Paul D. LoScalzo
Mark Steiner
Norberto Zimbleman
Robert Workman



Upper and lower 95% confidence bounds for the number of structures counted assuming a Poisson distribution.

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N (S)
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm ²)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.058 um
Primary filter area (mm ²)	385
Secondary Filter Area (mm ²)	
QA Type	

Client :	R & R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm ²)	811
Date received by lab	10-31-11
Lab Job Number:	223363
Lab Sample Number:	816714

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	AH
Analysis date	10-31-11
Method (D=Direct, i=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	G4-1	ND												
	F4-4	ND												
	F4-1	ND												
	E4-4	ND												
	E4-1	ND												
B	F3-4	ND												
	F3-1	ND												
	E3-4	ND												
	E3-1	ND												

Rev 3-2008

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N(S)
Voltage (KV)	100 KV
Madnification	20KX 10KX
Grid opening area (mm ²)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm ²)	385
Secondary Filter Area (mm ²)	
QA Type	

Client :	R-R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm ²)	811
Date received by lab	10-31-11
Lab Job Number:	223363
Lab Samole Number:	816715

Analyzed by	JTB
Analysis date	11/1/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting mles (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	H5-4	ND												
	G15-4	ND					Prep A	60% unburnt			3-5% debris			
	F5-4	ND					Prep B	80% unburnt			3-5% debris			
	E5-4	ND												
	C5-4	ND												
B	H6-4	ND												
	G6-4	ND												
	F6-4	M		1	10	1	CO		✓					
	F6-3	ND												

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N (S)
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm ²)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm ²)	385
Secondary Filter Area (mm ²)	
QA Type	

Client :	R-R
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm ²)	813
Date received by lab	10-31-11
Lab Job Number:	223363
Lab Sample Number:	816716

Analyzed by	JTB
Analysis date	11/1/11
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting rules (ISO, AHERA, ASTM)	AH
Grid storage location	Month Analyzed
Scope Allotment	Date Analyzed

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	H4-3	ND												
	G4-3	ND					Pup A	80% ambient			3-5% debris			
	G5-3	ND					Pup B	80% ambient			3-5% debris			
	F5-3	ND												
	E5-3	ND												
B	H4-6	ND												
	G4-6	ND												
	F4-6	ND												
	E4-6	ND												

Rev 3-2009

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material

Reservoirs Environmental, Inc.
TEM Asbestos Structure Count

Laboratory name:	REI
Instrument	JEOL 100 N S
Voltage (KV)	100 KV
Magnification	20KX 10KX
Grid opening area (mm ²)	0.011
Scale: 1L =	0.28 um
Scale: 1D =	0.056 um
Primary filter area (mm ²)	385
Secondary Filter Area (mm ²)	
QA Type	

Client:	RER
Sample Type (A=Air, D=Dust):	A
Air volume (L) or dust area (cm ²)	813
Date received by lab	10-31-11
Lab Job Number:	223363
Lab Sample Number:	816717

F-Factor Calculation (Indirect Preps Only):

Fraction of primary filter used	
Total Resuspension Volume (ml)	
Volume Applied to secondary filter (ml)	

Analyzed by	
Analysis date	
Method (D=Direct, I=Indirect, IA=Indirect, ashed)	D
Counting mles (ISO, AHERA, ASTM)	Alt
Grid storage location	Month Analyzed
Scope Alignment	Date Analyzed

Grid	Grid Opening	Structure Type	No. of Structures		Dimensions		Identification	Mineral Class			Sketch/Comments	1 = yes, blank = no		
			Primary	Total	Length	Width		Amphibole	C	NAM		Sketch	Photo	EDS
A	H3-4	ND												
	G3-4	ND												
	F3-4	ND												
	E3-4	ND												
	C3-4	ND												
B	H3-3	ND												
	G3-3	ND												
	F3-3	ND												
	E3-3	ND												

LA = Libby-type amphibole

OA = Other (non-Libby type) amphibole

C = Chrysotile

NAM = Non-asbestos material

Rev 3-2009

Analytical Procedures – AHERA

Transmission electron microscopy/energy dispersive X-ray spectrometry/selected area electron diffraction (TEM/EDX/SAED) was employed in the analysis of the samples, which were collected on 25 mm mixed cellulose ester air filters. A portion of each filter was collapsed with acetone and etched in a plasma asher. The etched filter was then coated with a thin layer of carbon in a carbon side down. The sample was then placed inside a condensation washer and treated with acetone to remove the filter matrix and expose any inert material.

For each sample, enough grid openings on a 200 mesh TEM grid are analyzed to ensure an analytical sensitivity of at least 0.005 structures/cc. A minimum of four grid openings from two preparations are analyzed for each sample. The grid openings are searched for fibrous structures which, if present are analyzed by SAED and/or EDX (elemental analysis). The AHERA protocol requires SAED confirmation of enough chrysotile asbestos structures on each sample to cause the sample to exceed 70 structures/mm² (usually 4 or 5 structures). Both SAED and EDX confirmation are required of enough amphibole structures on each sample to cause the sample to exceed 70 structures/mm² (usually 4 or 5 structures) per sample. Either SAED or EDX is required for the remaining asbestos structures of either type. The morphology of each structure is determined and the length and the diameter of any asbestos structures are recorded. Asbestos fibers, bundles, cluster and matrices were identified and recorded. The asbestos structures have been defined in AHERA as follows:

- Fiber:** is a structure having a minimum length greater than or equal to 0.5 micron with an aspect ratio of 5:1 or greater with substantially parallel sides.
- Bundle:** is a structure composed of three or more fibers in parallel arrangement, with each fiber closer than the diameter of one fiber.
- Cluster:** is a structure with fibers in random arrangements such that all fibers are intermixed and no single fiber is isolated from the group.
- Matrix:** is a fiber or fibers with one end free and the other end embedded or hidden by a particulate. The exposed fiber end must meet the fiber definition given above.

If more than 50 asbestos structures are identified and confirmed on a sample, AHERA analysis may be terminated after completion of the grid opening, which contains the 50th structure. AHERA protocol requires the laboratory to reject any clearance sample which contains in excess of 25% total particulate loading or which appears to be unevenly loaded.

The AHERA protocol includes specific sampling requirements, including minimum numbers of samples and minimum air volumes. Specifically, the 70 structures/mm² clearance criteria is only allowed for sets five inside samples (collected in a group of 13 samples including: five outsides and three blanks) with volumes greater than 1200 liters (40 CFR Part 763, page 41894). Deviation from the AHERA sampling protocol may affect the validity of the analytical results. Analysis of samples collected by non-protocol methods are not accredited by NVLAP

Equations Used for Calculations

$$\text{Area Analyzed, mm}^2 = \# \text{ GO counted} \times \text{Average GO Area (mm)}$$

$$\text{Concentration, s/cc} = \frac{\# \text{ Asbestos Structures}}{\# \text{ GO Counted}} \times \frac{1}{\text{Volume (L)}} \times \frac{\text{Eff. Filter Area (mm}^2\text{)}}{\text{Average GO area (mm}^2\text{)}} \times \frac{1 \text{ L}}{1000 \text{ cc}}$$

$$\text{Filter loading, s/mm}^2 = \frac{\# \text{ Asbestos structures}}{\text{Area Analyzed (mm}^2\text{)}}$$

GO = TEM grid opening